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11B

CLAY TOBACCO-PIPES, WITH PARTICULAR REFERENCE TO THE BRISTOL INDUSTRY

IAIN C. WALKER

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by Iain C. Walker

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CHAPTER 6

BRISTOL

SECTION I:
FROM EARLIEST REFERENCES TO THE FORMATION OF THE BRISTOL GUILD, 1652

As noted in 1: V, the earliest-known reference to smoking in England appears to be to a sailor in Bristol in 1556 who walked in the city streets emitting smoke from his nostrils and was chased by a hostile crown for doing so. Unfortunately, the original source for this statement has not been found, and in any case it may be to cigar- rather than to pipe-smoking - if so, it may reflect Bristol's traditional trading links with Spain, links which continued unitl the eve of the Spanish Armada (Latimer 1900: 1; Little 1954: 106, 1967 ed).

The 80 years between the accession of Elizabeth I and the outbreak of the Civil Wars saw the rise of monopolies, particularly those granted to partnerships or companies rather than, as earlier, to individuals. The earlier C17 saw the rise of a number of London-based monopolies whose interests conflicted with many provincial guild-run industries and trades - the tobacco monopoly discussed in 1: V is an example. As noted in 3: I, there was some sort of monopoly on pipemaking at least as early as 1601, there were monopolies on pipeclay form 1618, and in 1619 the "Society of Tobacco Pipe Makers of westminister in the County of Middlesex" was formed with a monopoly on pipe-production throughout England and Wales. This guild had a fitful existence, being dissolved in 1621 and being revived in 1634 only to be dissolved again in 1639. When finally refounded in 1663 it lasted just over 200 years, but never had effective authority beyond the London area. Other London monopolies of the period, however, notably the soapmakers who largely strangled the Bristol soapmakers' guild, and the shipbuilders, vintners, and starchmakers, all damaged these Bristol industries; and the London goldsmiths and pewterers both exercised their search rights in the South-West in the 1630s (F.H. Rogers 1949: 150-67, 170-4; Latimer 1900: 144-5). As noted in 3: I, even the London pipemakers, weak though they were, went as far as Southampton in the 1630s searching for unlicenced pipemakers.

All these harassments cannot have gone un-noticed by the Bristol pipemakers, and probably forced them into a semi-clandestine existence. This would explain why, though pipemakers are noted in Bristol from 1619 on, none appear in the burgess rolls until 1640, when the Westminster guild had been dissolved and Charles I had more pressing problems to attend to than to worry about infringed monopolies. Presumably pipemakers were kept off the burgess rolls in case the books were examined; some were recorded in the apprentice rolls as taking apprentices, perhaps on the assumption that the Westminster monopolists would be less likely to check that source.

The earliest-known reference to pipemaking in Bristol occurs in November 1619 when one Richard Berryman took John Wall, son of Thomas Wall, a Bristol goldsmith, apprentice. This indicates pipemaking had started in Bristol by that date. Assuming that the Berryman whose first name was left blank in the 1652 guild charter was this Berryman, he appears to have been in business for a considerable time; he and his wife Anne certainly took apprentices in 1639/40 and 1640. Oswald notes (*in litt.* 21 July 1970) that Chalkley found the name Berryman in the Stepney and St George's-in-the-East parish registers, and as it seems an unusual name it is possible there was a connection; on the other hand there seem to be no Berryman *pipemakers* known from East London and Chalkley is extremely inaccurate where this writer has been able to check his work. However, the will of a Henry Berryman, a pipemaker at Kelvedon which is between Chelmsford and Colchester in Essex, was proved at the latter town in 1703 (Harley 1964: 214), indicating a maker of this name in the later C17 in an area to which an East London pipemaking family might have migrated. (Oswald's reference (1960a: 55) to a pipemaker Benjamin Berryman taking an apprentice in Bristol in 1613 is based on a double error: Pountney in his manuscript list of Bristol pipemakers inexplicably read Richard as Benjamin but had the correct date 1619, while Chalkley in quoting Pountney to Oswald unaccountably gave him 1613.)

Certainly, as noted in Section VII(a)(2) below, bowl forms used by Richard Berriman and other early Bristol pipemakers are similar to known London forms of the first half of the C17. It is in this period too that London and London-style pipes, helped by the monopolies given the Westminster guilds, spread widely in England (Oswald 1960a: 42; Atkinson and Oswald 1969: 204), occurring as far away as the North-East, doubtless coming with the coal trade (Parsons 1964: 238), and Plymouth, where in fact the earliest reference to pipes is a shipment to the city of seven boxes from London in 1617 (Oswald 1970a: 127 and *passim*; Barber in Oswald 1970a: 125). The earliest Broseley bowls, which date from ca.1630, suggest the industry there was started by a Londoner and that local makers subsequently evolved their own distinctive Broseley bowl-shapes (Oswald and James 1955a: 188, revised dating in Oswald 1970b: pl 201).

The second known Bristol pipemaker is Samuel Lewis. As a smith he is noted taking apprentices from the early C17, but in 1623 when his son Edward and another youth are apprenticed to him he is described as a smith and tobacco-pipe maker. In 1626 when a William Lewis is apprenticed to him he is described simply as a smith, but William Lewis took his freedom as a pipemaker (the first to be recorded) in 1640 and had taken an apprentice pipemaker shortly before that - in 1639/40 - and Edward Lewis was listed as a pipemaker taking apprentices in 1631, 1632/3, and 1640/1, so there can be no doubt that Samuel Lewis taught them the craft.

About this time a John Casy, described as an aquavite maker and tobacco-pipe maker, took Alexander Cherrington apprentice. Cherrington had previously been apprenticed to a shearman (his deceased father, also Alexander, had been a clothworker) in 1621 but just under a year later had been discharged and apprenticed to a brewer and subsequently - no date is given - he was turned over to Casy. He is perhaps the same Alexander Cherrington son of Alexander a clothworker deceased, who had been apprenticed to a shearman in 1619 and turned over to another less than a year later.

Repeated apprenticeship of the same person, often to different masters, without cancellation of the previous entry or any explanation appears to have been very frequent at least during the period 1532-42 examined by Hollis (1949: 15). Apart from Cherrington, one other example is known involving a pipemaker-apprentice - Stephen Bowrey, whose apprenticeship to

Francis and Alice Russell is recorded first on 4 September 1673 and again on 4 November of that year. The second entry differs from the first, however, in specifying seven years instead of eight; but when Bowrey is "by consent of all" discharged and his indentures cancelled 28 March 1674 this notification is added to the September entry only. Willis and Merson, noting duplication at Southampton (1968: xiv), indicate evidence for the rolls being periodically made up from entries on scraps of paper or a rough notebook, which would account for double entries, and there is certainly evidence for this in the Bristol rolls (see Bowrey entry in Appendix IX); in Bowrey's case the second entry may have been inadvertantly dated to one of the days the rolls were being updated and perhaps the difference in length of apprenticeship was carelessness in assuming Bowrey's term was for the by now common seven-year period instead of eight.[1]

The next pipemaker noted is Samuel Morris, described in 1628/9 when he took an apprentice, as a saddler and tobacco-pipe maker, a combination which with Samuel Lewis's combining smithing and pipemaking and John Casy's combining distilling and pipemaking, suggests pipemaking was not well-enough established as a business to give full-time employment to many. The listing in each case of pipemaking as the second trade may indicate, however, that it was a profitable sideline. As late as 1656 a Thomas Monkes was noted as a pewterer and pipemaker, though in 1669/70 he is referred to simply as a pipemaker - both references are to taking pipemaking apprentices. (At least in the C15 and C16 attempts were made to prevent the carrying on of two trades by the one person. Various acts of parliament legislated against cordwainers being tanners, or cordwainers or tanners being curriers, or brewers being hoopers; but in fact there were many examples of mixed trades even during this period (Hollis (ed) 1949: 11-12).)

By 1630/1 the John Wall noted above was taking apprentices - one, Thomas Poyte listed among the guild founder-members (see below) and still working in 1671.

Altogether, 16 pipemakers (including the widow of one who carried on her husband's trade - the husband is otherwise unknown) are mentioned between 1619 and 1648, most of them in connection with taking apprentices, of whom 27 are recorded in the same period. As noted above, the first pipemaker to take his freedom did so in 1640 and only two more did so between then and 1648 - both of them, Robert Powell and John Calloway, are recorded as former apprentices of John Wall, though there is no evidence that Wall himself was ever a freeman and therefore legally able to take apprentices.

Events leading up to the formation of the Bristol pipemakers' guild in September 1652 suggest there was a concerted, if not wholly legal, effort on the part of the City Fathers to promote the industry as a going concern. In the first place, of the 25 founder-members listed and described in the charter (Appendix VI) as all being either freemen or (in four cases) widows of freemen only 9 are known to have been free at the time and 6 are known to have taken their freedom after the formation of the guild - in one case, that of Hugh Lewis, as late as 1661 - and 6, plus the deceased husbands of the 4 widows, are not recorded as ever having taken their freedom. Secondly, between March 1649/50 and November 1651 no fewer than 7 pipemakers take their freedom, all by special dispensation:

Philip Edwards sr, 21 March 1649/50 - by order of the Mayor and Aldermen with the condition that he take apprentice only poor men's children born and bred in the city;

Humphrey Partridge, 25 September 1650 - by order of the committee chosen for admitting freemen, on Partridge's petition and payment of ordinary fees;

Flower Hunt, 23 May 1651 - by express order of the Mayor and Aldermen, with payment of a fine of £5 and a promise to take as apprentice or foreman only freemen or sons of freemen of Bristol;

John Hunt, 23 May 1651 - by express order of the Mayor and Aldermen, with payment of a fine of £5;

Thomas Smith sr, 24 May 1651 - by express order of the Mayor and Aldermen, with a fine of £2;

William Williams, 17 September 1651 - by express order of the Mayor and Aldermen, with a fine of £2 (Williams had been apprenticed to Humphrey Steevens on 10 June 1639 for seven years plus a convenant year);

John Abbot, 10 November 1651 - by express order of the Mayor and Aldermen, with a fine of £2.

In addition to these seven Richard Nunney, who was a founder-member of the guild but one of a number who did not become free until some time after 1652, was made free by order of the Common Council with a fine of £2 on 8 September 1665, and should probably be regarded as one of those specially brought in because of his experience. Another founder-member, James Fox, who was working in 1651 and is probably the "John Fox" apprenticed to Richard Berryman in 1639/40, was also made free by order of the Common Council - though without having to pay a fine - in 1654.

As indicated above, prior to Edwards only three pipemakers had taken their freedom, all by apprenticeship - William Lewis, Robert Powell, and John Calloway. William Lewis, the first pipemaker to take his freedom, did so on 6 June 1640; he is not among the guild founder-members and was therefore probably dead by that time.

Of the nine pipemakers (including Nunney and Fox) specially admitted as burgesses only Williams and Fox are Bristolians and apprenticed in Bristol. The others were presumably pipemakers from some already flourishing centres who were willing to help set up the Bristol industry, but there is no evidence as to their origins and the various lists of known English pipemakers noted in 1: 1 offer no help. London, as the largest pipemaking centre in the country, must inevitably be considered a possibility, though the notoriously inaccurate Chalkley produces no evidence to support his contention that "emigree" [sic] workers apparently from East London went to Bristol between 1644 and 1652 (Chalkley 1955a: 4th page). Cooksey (1974: 29, 30; in litt. 26 November and 18 December 1974) suggests that the William Cooper of Bristol noted taking apprentices in 1640/1 and 1642 but not listed among the guild founder-members and so presumably dead or away from Bristol by 1652 may have been the William Cooper of Poole who was granted a 21-year lease on 19 November 1625 to exploit certain pipeclay deposits near Poole (see p.255 above); but the document giving Cooper this lease (Cooksey MS 1) describes him as a "Gentleman" of Thickfurzes, a farm near Poole, and it seems very unlikely he would ever have become an artisan, either in Poole or elsewhere.

The name Nunney, however, is a local one, presumably taken from the north Somerset village of that name and by 1662 Nunney had a relative of the same name (possibly a brother) in St Philips, Bristol - Robert, a cordwainer - because Richard was bondsman to a wedding agreement involving Robert. The fines levied seem high - as discussed in 5: II the average wage of a pipemaker in the first half of the C17 might have been ca.1s a day, so that £5 would have represented about four months' wages. However, these fines were small compared to that of £20 paid by a "distiller and metheglin maker" in 1677 (Latimer 1900: 384 - metheglin is not as dangerous as it sounds, being a beer made from honey). The Hunts (there is no definite evidence they were brothers but it seems likely, and they made very similar pipes) must have been both fairly well-to-do and reasonably emenable to promises of greater scope to leave wherever they had been working to come to Bristol. (A number of Hunts are recorded as pipemakers later in the C17 in Bristol and elsewhere in the West Country, where their pipes are very common, but there appears to be no references to them before 1651 - this problem is discussed in Section VII(a)(2) below).

Of some of the 25 guild founder-members the only thing known about them is their name - in one case even that is uncertain. The names given are as follows:

*Humphrey Partridge (F 1650, D or left Bristol by 1654);**
*Philip Edwards I (F 1649/50, fl 1668/9, D by 1683);
*William Williams I (A 1639, F 1651, fl 1685);
*Thomas Smith I (F 1651, fl 1654, D by 1672);
*John Calloway (A 1641, F 1648, fl 1670);
Robert Hancock (A 1640/1, F 1655);
*Robert Powell I (A 1636, F 1647);
Hugh Lewis (F 1661, fl 1665, D by 1674);
Alexander Cherrington (A ca.1625, F 1654, fl ca.1660);
*John Abbot (F 1651, fl 1681, poss. D by 1696);
*John Hunt (F 1651, fl 1653);
*Flower Hunt (F 1651, fl 1670, D by 1672);
Thomas Dodding;
Thomas Poyte (A 1631, dismissed 1634, F 1656, fl 1671);
William Bitt... (prob. Biddell, fl 1663);
Richard Nunney (F 1655, fl 1696, D by 1713);
Edward Abbott (fl 1641 Waterford, Ireland, fl 1654 Bristol);
Thomas Deane (fl 1643-53);
Abraham Reeves;
James Fox (prob. A 1639/40, fl 1651, F 1654, fl 1668/9, poss. fl 1696);
[Richard] Berryman (fl 1619);
Jane Wall (widow of John; fl 1650-61, D soon after 1661?);

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*Free prior to formation of guild.

**A - apprenticed; F - free; fl - recorded (latest date, and earliest when significant); D - dead.

Elizabeth Lewis (widow; wives of both Samuel and Edward - see earlier - called Elizabeth);
Lettice Phillips (widow; husband unknown);
Christian Smith (presumably widow; husband unknown).

Of these, 16 are recorded as having taken apprentices, though all 3 of Berryman's, 2 of Dean's 3, one of Wall's 4, one of Edwards's 3, and Powell's single apprentice were all taken prior to 1652. Of the remainder, Nunney was the most industrious, taking at least 8 between 1655 and 1691; but Flower Hunt and after his death his widow, Christian, took at least 10 apprentices between them over the period 1653-1685/6. Williams and John Abbot had at least 5 apprentices as had Smith and his widow Anne between them, while Calloway had at least 4, Edwards at least 3 plus a son who took his freedom by patrimony, and Fox at least 3[2] (despite the stipulations that Edwards take apprentice only poor men's children born and bred within the city and Flower Hunt only Bristol freemen or freemen's sons, one of Edwards's apprentices was the son of a deceased Bath glover and another was one of his own sons while one of Hunt's apprentices was from Chilcompton in Somerset and another from Wells). Of the 9 pipemakers (including Nunney and Fox) given their freedom to help start the guild, therefore, 6 - Edwards, Flower Hunt, Smith, Williams, John Abbot, Nunney, and Fox - well fulfilled the task entrusted them. Patridge had either left the city or (more probably) had died less than two years after the founding of the guild, for when his son Walter was apprenticed 1 May 1654 to a cooper the father is referred to as "late of Bristol", a phrase which is usually followed in the apprentice rolls, though not in this case, by the word "deceased". John Hunt is not recorded after 1653, when he and his wife Jane took an apprentice, and he too may have died soon after helping to found the guild.

Partridge had a teenage son by 1654, which gives some idea of his age on taking his freedom in 1650, presumably immediately on arriving in Bristol. He must have been at least in his early 30s, and if he did not marry until he had finished his apprenticeship wherever that was (assuming he had had an orthodox apprenticeship) he would have been nearer 40. The guild appears to have had its share of younger, or alternatively long-lived, members: Nunney was still alive in 1696, when he must have been ca.65, and he was probably the last survivor of the original group (though Smith's widow Anne was also still alive in 1696), but Williams was still alive in 1685 when he must have been ca.60 as he had been apprenticed in 1639, and John Abbot was still alive in 1681. Poyte was still alive in 1671, Calloway in 1670, Fox in 1669, and Edwards in 1668/9, while Flower Hunt died between 1670 and 1672. (If the maker's mark on pipestems attributed to Fox is indeed his then he was working ca.10-15 years later than 1669 on the evidence of the bowls found attached to these marked stems. Possibly he is the James Fox noted in 1696; if so, he must have been ca.70 as he was probably apprenticed 1639/40.) Considering life expectancy in the C17, the Bristol guild was at least adequately served with long-lived members to give it and its industry a sound start.

The guild charter notes that

> Whereas The Art and Skill of makeing tobacco pipes is become a Trade a [sic] very usefull and beneficial to

> the makers of them within this Citty and Whereas many Inhabitants and Free Burgesses of this Citty doo by the use and exercise of that Art and mistery maintain themselves their Wives and Familys and having been bread and brought up Apprentices in the same Artifice none others nor lawfully may but such only as they have bene bound Apprentices....

The inclusion in the list of founder-members of so many otherwise unknown or obscure names - those of Poyte, dismissed as an apprentice in 1634, and Cherrington and Hancock who apparently never finished their apprenticeships - reinforces the suggestion that Bristol was making a planned effort to set up a trade which she hoped would be economically profitable and bolstering it against any attack by producing a show of numerical strength, an apparently regular establishment of freedom and apprenticeship, and a general appearance of established tradition. (It is possible that this may be behind Mackenzie's reference (1957: 79) to London pipemakers at an unspecified date trying to stop Bristol pipemakers cutting them out, but if so the story as recounted by Mackenzie is garbled and this writer has been unable to find any original.)

A similar situation may have obtained with the related trades of tobacco-cutter, tobacco-roller, and tobacconist. The first two tobacco-cutters to become free (in 1648 and 1651) did so by special permission and payment of fines and in one case a promise to take apprentice only Bristol freemens' sons, similar to the seven pipemakers noted above. Indeed, as late as 1666 a tobacco-cutter was admitted by fine, suggesting the City Fathers were eager for such tradesmen (Tyack 1935b: 197). Similarly, the first three tobacco-rollers to appear as freemen - in 1658/9, 1662, and 1663/4 - did so by special permission, though with no fine (Tyack 1935b: 198), as did the second (though not the first) tobacconist, in 1663, and another one in 1679 (Tyack 1935b: 199). Such admissions of people with trades beneficial to the city were not unknown - a virginal-maker in 1609 and a cook in 1617, for example, in these cases on condition their families did not claim freedom after their death. In 1700 a brushmaker, a furrier, and a pattern-maker were made free gratis because there were no others in the city (Latimer 1900: 395) and as late as 1722 a Mr Jones was admitted free gratis because of his skill as a writing-teacher and his ability as an author of treatises on arithmetic and book-keeping (Latimer 1893: 123).

No systematic attempt was made to examine the apprentice rolls of the first half of the C17 for apprentices to the trades of tobacco-cutter, tobacco-roller, and tobacconist, but the earliest tobacconist apprentice noted, Edward Smith, appeared in 1635, when his master, George Garrant, was noted as a tobacconist. Smith became in fact the first tobacconist freeman, in 1647, at which time Garrant was recorded only as a freeman (Tyack loc. cit.). It is possible that Garrant was free of a guild not directly concerned with tobacco-dealing, for Tyack records many tobacco-cutters, tobacco-rollers, and tobacconists taking their freedom by virtue either of marriage to the widow or daughter of a freeman or by simply being the apprentice of a freeman of unspecified trade. Garrant indeed may have been one of the 92 licenced tobacco-sellers in Gloucestershire noted in 1637 (Mackenzie 1957: 136). The definite impression, however, is that all three trades, like pipemaking, did not become organized in Bristol until after the London-based monopolies ended with the Civil Wars in the 1640s. Whatever the exact effect of these monopolies on Bristol trade and industry - Rogers (1949: 174) thinks the complaints are somewhat exaggerated - it would be a curious coincidence if the apparent surfacing of these trades and their conscious fostering by the city in the 1640s and 1650s were not connected with the disappearance of London monopolies. In particular the removal of the tobacco monopoly in 1638 after 23 years must have benefited Bristol, however much smuggling Bristol may have indulged in (see 1: V).

SECTION II: THE COMPANY AND FELLOWSHIP OF TOBACCO-PIPE MAKERS OF BRISTOL AND BRISTOL GUILD ORGANIZATION

(a) INTRODUCTION

Until the end of the C17 civic trades in Bristol, as in other centres, were controlled by the trade guilds (for a general account of guilds see Lipson 1915: chapt VIII, 1959 ed and 1931: 330-51, 1956 ed). These acted not only as protectors for the trade and those in it but were regarded by the municipal authorities as the traditional means of keeping industrial control and discipline. In Bristol, guilds were in existence by the mid-C14 (F.H. Rogers 1949: chapt 1, passim). It is therefore logical enough that Bristol tobacco-pipe makers formed a guild, in 1652 (charter transcribed in Appendix VI).

The first state recognition of guilds was in 1437 when an act stipulated all Letters Patent and Charters were to be registered and all future ordinances needed the approval of the Justices of the Peace or the leading city officials. This did little more than confirm the authority of local officials over guilds.

In 1503/4 an attempt was made to assert some state control over guilds. All acts and ordinances made by guilds had to be examined and approved by the Chancellor, the Treasurer, and the Chief Justice of either Bench, or by both Judges of Assize during their circuit. No guild was to impede access to common law by members. In 1530/1 the provisions of the act of 1503/4 were again rehearsed, and it was noted that guilds had issued illegal ordinances, and imposed high fees and heavy burdens on those becoming apprentices or on apprentices becoming freemen. Standard admission fees of 2s6d for an apprentice and 3s4d for a freeman were set. That guilds soon evaded this attempt to break restrictive practices is evident from an act of 1536 which noted guilds were forcing respective freemen to swear they would not set up business without permission from their guild; this was forbidden and the fees established five years previously were reaffirmed (cf Hollis (ed) 1949: 9-10).

The major piece of government legislation on employment in the C16 was the Statute of Apprentices of 1563, which was an attempt to produce one comprehensive statute regulating employment (cf Lipson 1915: 314, 1959 ed). It stated no-one could practice a craft unless he had served an apprenticeship of at least seven years and that no apprentice could become a master until he was at least 24 years old. The hours of work for an apprentice were set as follows: from mid-March to mid-September, from 5 a.m. or earlier to 7 or 8 p.m. with half-an-hour for breakfast, an hour for dinner,[3] and half-an-hour for drinking, with an additional half-hour for sleeping from mid-May to mid-August; from mid-September to mid-March, from dawn to dusk with the same hours for meals as in summer. Absence was fined at a penny an hour.

The C16 acts outlined above form the background to C17 employment, and it is against this that one has to set early pipemaking in Bristol.

Unfortunately, no documentary material relating to the Bristol pipemakers' guild is known to have survived besides their charter (Appendix VI),[4] but Bristol guilds in general during the C16 and C17 have been studied (F.H. Rogers 1949) and from this an idea of their function in the C17 can be obtained. Further, considerable information from the apprentice-and freedom-roll entries of pipemakers, which indicate trends over the two centuries and more such entries were made. The following discussion, therefore, considers what is known from these sources in relation to how other Bristol guilds of the C17 functioned, and goes on to examine what can be learned from the apprentice and freedom rolls, and other sources such as poll-books and trade directories, about the C18 and C19.

(b) EXTERNAL ORGANIZATION

How far the regulations of 1503/4 regarding the approval of guild ordinances were observed in Bristol prior to the C17 is uncertain, though some evidence suggests they were not always observed. During the first quarter of the C17 thirteen guilds are known to have had ordinances confirmed under these regulations and no ordinances confirmed in any other manner are known. From 1628 onwards, however, almost all guilds had their ordinances approved by the Mayor, Aldermen, and Common Council (F.H. Rogers 1949: appendix III), which suggests that during the second quarter of the century there was a growing and successful assertion of control by local authority. The ordinances of the Pipemakers' guild were among those approved in this manner, in 1652 (unless otherwise noted information relating to the Pipemakers' guild is taken from their charter, the text of which if given in Appendix VI). In fact this move had been foreshadowed in the preceding quarter-century, for by virtue of the city charter of 1373 the Mayor of Bristol was a Justice of the City and thus all that was necessary under the 1503/4 act was one other Justice, and most of the ordinances approved in the first quarter of the century were approved in this way. The growing hostility between king and parliament during the second quarter of the century probably encouraged such acts of independence, and reinforces earlier suggestions that Bristol felt able to establish a pipemakers' guild because of the breakdown of royal monopolies as the Civil Wars approached.

Those working in crafts were masters (that is, freemen pursuing their trade), journeymen (those who had served their apprenticeship, might or might not be free, but did not have their own business and thus worked for masters), and apprentices (those learning a trade under a master). Apprenticeship as a means of obtaining freedom spread from London precedents from the C13 and had reached Bristol by 1331 (Bickley 1900: I, 37-8; Lipson 1915: 323, 314, 1959 ed; Unwin 1927: 96). By the C15 the London practice of a minimum apprenticeship of seven years had been adopted in Bristol (F.H. Rogers 1949: 36, 42, 44, 48; Hollis (ed) 1949: 4) and by the mid-C16 another London practice, that of an apprentice having to be 24 before taking his freedom, was widespread (Lipson 1915: 215-6, 1959 ed).

Conditions other than apprenticeship by which freedom could be granted varied in Bristol at different times (cf Hollis (ed) 1949: 8), the problem being to reconcile conflicting interests as to number of incomers and to see those admitted were of reputable standing. In 1607 freedom other than by apprenticeship, patrimony (one's father being a freeman), and marriage was restricted to grants made with the consent of the Mayor, Aldermen, and

Common Council, but less than a year later it was found necessary to emphasize that neither the Mayor or Chamberlain could admit a person on their own responsibility.

The Merchant Tailors (protected by their royal charter) and the Cordwainers had a limiting number of craftholders after which no more strangers could be admitted but only those who had served an apprenticeship with Bristol freemen, and the Merchant Tailors reaffirmed this in 1649. However, no other guild had this policy and in 1654 the Council decreed that anyone made free of the city (that is, by them) was to be admitted to the company of the trade to which he had previously been apprenticed; the Mayor and Aldermen reserved the right to reduce excessive guild fees on appeal, and in 1674 the council forced the guild headed by the Smiths to accept a cutler made free by them on his marrying the daughter of a Bristol freeman. In the first half of the C17 some guilds were very jealous of would-be entrants, but many would take stranger journeymen if they had a testimonial of completed apprenticeship (F.H. Rogers 1949: 73).

In 1657 new regulations were made regarding granting of freedom:

(a) as a gift - only to be conferred on the Lord High Steward, the Recorder, anyone who might be helpful to the city, those chosen by the Mayor or with the council's consent

(b) redemption (buying) - forbidden; freedom to be awarded only in return for a valuable consideration and on petition first being made by the Mayor and Common Council

(c) marriage - petition to be made to Mayor and council within a year of the marriage, and a widow or daughter of a freeman could only free one husband unless otherwise agreed to by Mayor and council; further, widows and daughters could not make a husband free if the original husband or father had not paid taxes for seven years or did not live in the city or pay taxes

(d) any stranger admitted by marriage had to produce the names of two burgesses as security.

These restrictions suggest the number of those obtaining freedom by means other than apprenticeship was causing concern, and throughout the C17 these were an ever-increasing number. In 1669 the Mayor's privilege of nominating one personally annually for freedom, confined in 1657, was repealed.[5] Coincident with this trend there were increasing numbers of non-freemen trading in the city, and repeated legislation to remove them and to control goods brought into the city was ineffective. Until the 1770s, however, city and guild authorities continued the unequal fight to keep strangers out (see Section II(d) below).

The ordinances of the Pipemakers stated that no-one save those listed as founder-members and those subsequently admitted by having served apprenticeships were to make tobacco-pipes. An examination of the freedom rolls indicates that freedom by patrimony and marriage were also accepted by the guild - this was probably standard practice and therefore not specifically mentioned in the guild ordinances - and in fact only four pipemakers were granted freedom by special permission after 1652 and two of these, James Fox F 1654 and Richard Nunney F 1655, were founder-members of the guild and two of the several who had neglected to take their freedom prior to the formation of the guild. Nunney, like the seven other specially-freed members, was made free by order of the Common Council, paying a fine of £2; Fox was made free similarly, but paid no fine. The other two granted freedom by special permission were William Cherrington sr made free 1660 by order of the Mayor, Aldermen, and Common Council; and John Tucker sr made free 1662 by similar order and with a 10s fine in addition. No reason is given for these two being granted special freedom but probably both were experienced pipemakers and the city authorities decided their admission would add quality to the rapidly-expanding industry. Both had several apprentices free subsequently.

There are two other cases of the City Fathers allowing an individual to become free. One was that of Francis Russell who was made free 1669 by order of the Mayor and Aldermen on his petition that he was an apprentice of John Tucker sr. As Tucker was certainly alive at this time - he took a number of apprentices in the 1670s and 1680s and did not die until sometime between 1687 and 1691 - it is strange that Russell had to petition for his freedom, but the apprentice rolls for 1658-59 and 1661-67 are now missing and as Russell must have apprenticed 1662 (Tucker became free that year and Russell became free 1669 and presumably had a seven-year apprenticeship) and if the apprentice records had been lost or destroyed as early as the 1660s then Russell may have had difficulty in proving his claim. Against this, however, is the fact that a number of other pipemakers whose dates of apprenticeship are also unknown but who must have been apprenticed during the period covered by the lost records - for example, Thomas Watts F 1675 and an apprentice of Robert Tippett I, or John Garratt F 1676/7 and an apprentice of John Abbott - took their freedom without any apparent difficulty.

The other case was that of Ezekiel Millard who was apprenticed in 1705/6 to John and Margaret Harvey for seven years and who became free in 1713 by order of the Common Council, the reason given being that he had served part of his apprenticeship. Why this was done is unclear. Harvey took Millard apprentice immediately after he himself had become free but there are no other mentions of him; however, had he died or left while Millard was still apprenticed to him, the normal course of events would have been to apprentice Millard to another pipemaker. In any case, Millard was an active pipemaker, for two apprenticeships to him are recorded.

Mention should also be made of Hugh Lewis, son of the Edward Lewis apprenticed in 1624 and working in the 1630s and 1640s. Hugh Lewis was a guild founder-member but did not take his freedom until 15 December 1661 when he did so by patrimony, his fee - the 4s6d charged all those taking their freedom - being waived by the Mayor. Lewis may finally have taken his freedom in order to legally take an apprentice - most of the apprentice rolls for the 1660s are lost, as noted above, but when Timothy Ricketts became free 17 April 1669 it was noted he had originally been apprenticed to Hugh Lewis and a normal seven-year apprenticeship would have meant starting ca.1662 - but why his freedom fee was waived is not stated. Possibly he was poorly-off - he is not known to have had any other apprentices, though the missing apprentice rolls prevent a definite statement on this.

Three other cases may be noted. On 6 August 1631 Thomas Poyte, son of John Poyte a joiner of Bristol deceased, was apprenticed for seven years to John and Jane Wall, but on 1 July 1634 he was dismissed and his indentures cancelled. However, he appears among the guild founder-members in 1652, and when he takes his freedom in 1656 it is by patrimony. When the much-apprenticed Alexander Cherrington, another guild founder-member, took his freedom in 1654 he did so by patrimony, which makes one suspect his apprenticeship sometime after 7 October 1622 to John Casy had been no more successful than his previous apprenticeships. A similar case occurs with fellow guild founder-member Thomas Hancock, though again it is not specifically stated that Hancock failed to finish his apprenticeship. On 8 February 1640/1 Hancock was apprenticed to William and Joan Cooper for seven years and recorded as the son of Thomas Hancock of Bristol, glover, but when he took his freedom in 1655 he did so by patrimony, the entry reading son ("apprentice" stroked out) of Thomas Hancock. This, and particularly the stroking out of the word apprentice, strongly suggests Hancock never finished his apprenticeship. As discussed above, the inclusion of these three among the guild founder-members is one indication of the dubiously legal start the Bristol guild had; however, Poyte and Cherrington both took apprentices subsequently so they were evidently practicing pipemakers.

Freedom by marriage apparently included marrying the daughter or widow of a freeman of a different trade: pipemaker Richard King became free 1660 having married Elizabeth daughter of Thomas Nash a pinmaker; and Robert Tippet I, founder of the most famous Bristol pipemaking dynasty, became free the same year a few months earlier having maried Joane daughter of a William Thomas whose trade is not recorded (there were six Thomas pipemakers and another two apprentices noted, all subsequently, but there is no evidence that this William Thomas was a pipemaker.) These are, however, isolated instances in the C17. Robert Browning, who became free 1669, was the first to take his freedom by virtue of marriage to a pipemaker's daughter, having married Sarah daughter of Edward Battle.

A number of sons followed their father in the pipemaking trade. In a majority of instances the son was definitely apprenticed to his father (e.g. Francis Russell jr, A 1684 F 1698/9), but in other cases no mention of actual apprenticeship is noted: for example, Francis Edwards became free 1683 on the grounds that he was a son of Philip Edwards sr, pipemaker deceased. Curiously, Francis Edwards's presumably elder brother Philip jr who became free 1680 did serve an apprenticeship to his father; and the opposite sequence is seen with Robert Tippet I's two sons Robert II and William sr, Robert II becoming free by patrimony 1678 and his presumably younger brother William becoming free 1689/90 after an apprenticeship initially to his father and completed with his widowed mother. It is possible that these cases reflect a policy of a freeman being supposed to be able to make free only one person by patrimony, though such a ruling does not seem to have been specifically recorded. Hugh Lewis, who as noted above took his freedom in 1661, was the first to do so on the grounds that his father Edward Lewis had been a pipemaker, though in fact Edward Lewis never appears to have been a freeman himself; Robert Tippet II in 1678 was the first pipemaker to take his freedom in this way with a definitely legal claim.

Freedom was also claimed by individuals whose father was or had been a Bristol freeman but in a different trade. As already noted Alexander Cherrington, Robert Hancock, and Thomas Poyte did this in 1654, 1655, and

1656 respectively apparently to cover uncompleted apprenticeships; in 1660/1 William Cissell took his freedom thus seemingly regularly, though his father's occupation is not given. Like Cherrington and Poyte, Cissell took apprentices, so he was a practicing pipemaker.

Additionally, if inconsequentially, this ordinance of the Pipemakers defining qualifications for freedom forbade the selling of any pipes within Bristol other than those made by Bristol pipemakers and their apprentices.

Apprenticeship was a method of ensuring the continuity and reputation of a craft (Lipson 1915: 314, 1959 ed) but inevitably it also became a method by which a guild could enforce its monopoly and those of its already-established members (Unwin 1927: 97-8; 1908: 347-8) - London pipemakers urged limitation on numbers of apprentices as a justification for incorporation in 1663 (Unwin 1908: 347 2nd n.). It was against this type of monopoly that the C16 legislation already noted was directed, but the reiteration of such acts is a measure of their lack of success. Despite a fine of £40 stipulated in the 1536 act for any company preventing qualified apprentices keeping shops such actions were standard and continued in Bristol at least into the last part of the C17, by which time the effective powers of the guilds were declining. The need for testimonials, the production of a masterpiece and a high examination fee, lengthening of apprenticeships or accepting a fine in lieu, setting of financial qualifications, charging apprenticeship fees above the statutory 3s4d, provisions of breakfasts or dinners for guild members on being elected, supplying funds or items for guild premises, outright swearing of an oath not to open a shop without the guild's permission, were all used.

The Pipemakers appear to have been relatively free of these abuses: all those taking their freedom by apprenticeship were charged 3s4d entry to the guild, and all members were charged 4d quarterly "for the use of their Common Hall and Stock". Meetings were to be held at least quarterly, and any member absent was to be fined 3s4d for each occasion. A sidelight on the times - or perhaps the guild authorities had the redoubtable James Fox, whose case is chronicled below, in mind! - was the ordinance that at these meetings members "shall behave themselves Civilly without any approbious or rude language against the Master or any also of the Company upon payne to Forfeite Six Shillings Eight pence for every tyme offending".

The London pipemakers' guild had much the same methods of raising money, though at least in the earlier C19 they had more expensive rates. Admission to the company at that time cost £1 and in addition there were payments of 6s to the Clerk, 1s6d to the Beadle, and 1s to the poor box. There was also stamp duty to be paid, there being apparently two rates, one of £1 and one of £3. Quarterage was 8s per annum for a master or mistress (women were eligible for guild membership and office) and 4s for a journeyman or journeywoman. The company was empowered to levy rates of 40s on masters and mistresses and 20s on journeypeople to cover debts incurred by the company. Members were fined 1s for arriving late at a guild meeting and 2s if they left the meeting without permission. The Master of the company if absent from a meeting was fined 20s, a Warden 10s, and an Assistant 5s (Robinson and Spence 1937: 208-9).

The right of appeal to common law of guild members laid down in 1503/4 and in the Statute of Apprentices was generally ignored in Bristol in the earlier C17; many guilds had the right to jail persistent offenders to await trial by the Mayor and in 1623 the Bakers threatened fines for members refusing to accept findings of their guild court. As the century progressed, however, dissatisfied guild members were able to go to local courts, perhaps initially due to parliamentary sensitivity to monopolies and restrictions interfering with law, but latterly aided by the decline in power of the guilds. As late as 1672 the newly-constituted guild headed by the Masons stipulated fines for members not taking their disputes initially to guild courts, but from 1680 onwards much time was spent in local courts on guild matters, suggesting the city was still supporting apprenticeship but that the guilds could no longer assert control over members (Rogers 183, 61, 96-9).

The guild system was not only the means whereby crafts were controlled by those already in the trades but also the organization through which local authorities gained and maintained control of the industry and its members (cf Lipson 1915: 322-3, 373-7, 1959 ed). Thus councils and guilds were closely associated in their work, and it is not surprising that as Bristol guilds began to lose their control towards the end of the C17 the council's interests lay in attempting to prop the crumbling structure.

In Bristol as elsewhere (Lipson 1915: 372-84, 1956 ed), the council asserted its authority from an early date and in a way parliament was never able to do. Guilds could hardly have persistently ignored parliamentary acts had they not had tacit approval from local authorities, but on the other hand Bristol kept a close hold on the independence of its guilds. Between 1616 and 1620 Bristol forced the Bakers to relinquish a royal charter they had obtained which would have freed them from city control, and when in 1671 the Innholders attempted to do the same they were quickly headed off (Rogers 122-36). In 1674 the council confirmed its control of city guilds by suspending the guild headed by the Smiths - a large organization said to have over 120 families - for refusing to admit a cutler made free of the city by the Mayor and Council and only reinstated it after humble apology to the Mayor (Rogers 136-7). The control the council maintained throughout the C17 on the complex relations between the Butchers' guild and butchers from the surrounding area indicates their continued influence over guilds in economic matters (Rogers 120-2).

In the case of the Pipemakers two clauses in their ordinances allowed them to make additional bylaws for their "better government and welfare" if approved by the Mayor and Aldermen "as they be agreeable to Law and reason and the liberties and privileges of the said Citty Saveing and reserving power to the Mayor and Comonality to change alter or revoake this or any others that shall be found prejudiciall to the Common good of the Citty or against the Laws of England", which clearly indicates the City's position.

A comparison on the one hand between the ordinances of the Westminster-London pipemakers' guild and those of the Bristol pipemakers and on the other between those of the Bristol pipemakers and those of other Bristol guilds leave no doubt that whatever the origin of those Bristol pipemakers imported to help start the guild, the Bristol city fathers saw to it that the guild kept to Bristol traditions and no others.

Guilds had no power to negotiate wages, the authority for fixing these being vested in the Justices of the Peace by an act of 1548 listing heavy penalties for workmen attempting to obtain higher wages and better hours. Local authorities' responsibilities were confined to enforcing specified wage-rates, and in the second half of the C17 several Bristol guilds had their wage-scales fixed by the Mayor and Aldermen. Guilds could, however, negotiate pay-structures with the Mayor and council, as appears to have been the case with the Tilers and Plasterers, whose original ordinance of 1670 was rejected by the council over a wage clause but was approved the next year. Their payscale (which was identical to that of the Carpenters, another guild found about that time, in 1665) gave daily rates of 2s a day for a master, 1s8d for journeymen and elder apprentices and 1s4d a day for younger apprentices. However, for tilers and plasters employed by the year a minimum of 8d a yard was allowed provided the workmen supplied lathes and plaster, and this latter clause appears to have been negotiated by the guild between its incorporation and the following year (Rogers 107-8). The Tilers and Plasterers, and the Carpenters, were the only guilds to publish their daily hours, and these show little difference from those laid down in the Statute of Apprentices (Rogers 109).

(c) INTERNAL ORGANIZATION: (1) Apprentices and Journeymen

From the above it can be seen that Bristol city council effectively controlled the guilds. The first step in apprenticeship was the formal enrollment of the prospective apprentice by the guild and by the city authorities: the latter were thus involved in apprenticeship from the outset, and had a list of apprentices in addition to one of freemen. In Bristol any practicing freeman could take an apprentice whose duty was to learn his master's craft. The contract was by indenture and for a minimum of seven years, and the indenture was inspected and enrolled in the presence of the Chamberlain, the enrollment having to take place within a year of taking the apprentice. Before this ceremony the apprentice was to be presented to his guild. At the end of their service apprentices were to be made freemen, before which they were again presented to their guilds (the Pipemakers indicated that all those about to become free "shall before the Master and Warden for the tyme being take their Oathes to be Observant in all things for the good and Welfare of the said Company and for the performance of all Orders and Constitutions made or to be made for the Order and Government thereof").[6]

Neglect of any part of this procedure could cost the master a £10 fine and again it is clear the city was closely connected with apprenticeship from beginning to end. As late as 1678 a case was brought against a Merchant Tailor for having had an apprentice three years without enrolling him. (In practice several guilds reduced considerably the one-year period for registration, presumably to counter the use of apprentices as cheap short-term labour - periods of between ten days and three months are noted by Rogers (45-6, 48 n.4), but the Pipemakers in fact reduced the period to eight days.)

Once entered into, apprenticeship involved both parties in responsibilities (Lipson 1915: 309-14, 1959 ed). A master was expected to give adequate instruction and to provide board, lodging, clothing, education, sometimes a small salary, and general welfare; an apprentice was expected to be obedient and attentive, to exercise fidelity and self-control, neither to steal nor gamble, not to marry without his master's permission, and to remain with his master for the agreed term. The instructions to apprentices laid down by the Westminster-London pipemakers' guild ran as follows:

> You shall constantly and devoutly on your Knees every Day serve God Morning and Evening, and make Conscience in the due Hearing of the Word preached, and endeavour the right Practice thereof in your Life and Conversation: You shall be diligent and faithful in your Master's Service during the Time of your Apprenticeship, and deal truly in what you shall be trusted: You shall often read over the Covenants of your Indenture, and see and endeavour yourself to perform the same to the utmost of your Power: You shall avoid all evil Company, and all Occupations which may tend to draw you to the same; and make speedy Return when you shall be sent on your Master's or Mistress's Errands: You shall avoid Idleness and be ever employ'd in God's Service or about your Master's Business: You shall be of fair, gentle and lowly Speech and Behaviour to all Men, and especially to your Governors; and avoid all manner of Gaming, Swearing and Drunkenness. And according to your Carriage you must expect Good or Evil from God and your Friends

(Reproduced in Oswald 1970a: pl 206 where it is dated to ca.1800; in Anonymous n.d.[5] inside front cover, the same document is illustrated but dated to the early C17. The ca.1800 date is correct for the document and other copies in the London guild's papers now in the Guildhall (Oswald *in litt.* 16 June 1972), but it may easily be a reprint of a much earlier original). The indenture of 12-year old Thomas Hughes of Broseley in 1848 contained much the same strictures. In becoming "a faithful apprentice to William Southorn in the art of a tobacco pipe maker" Hughes was signed for nine years of

> full and constant work for the payment of sixpence per gross for rolling and moulding common pipes and the sum of fivepence per gross for rolling and moulding short common pipes, the said payments to be made fortnightly during the said term

the money going to his mother who in turn provided food, drink, and other necessities. Hughes was admonished to warn his master of any pending disaster or robbery, to remain unmarried during his apprenticeship, not to play cards or dice or any other unlawful game, was not to partake of liquid refreshment in the local tavern or look at the dancing girls or visiting players, and would lose his apprenticeship if he sold pipes to his friends for his own profit, his mother in the last event forfeiting the very considerable sum of £50 in addition (indenture illustrated and contents recounted in Anonymous 1968c).

Although both these examples are of very late date it is extremely likely their contents differed little in substance from similar admonitions in preceding centuries; indeed, there are no essential differences in content between these two and the indenture used as late as 1893 for a girl working as a cigar-maker in Lincolnshire (N.R. Wright 1970: 25, 38 n.118).

Apprentices could successfully complain about ill-treatment and neglect of training, the cases being tried by guild courts and - increasingly in Bristol as the C17 progressed - by local courts where apprentices were allowed to change masters. An Exeter master had to pay the doctor's bill, a fine, and other expenses for unlawfully chastising an apprentice (Lipson 1915: 311, 1959 ed). Sick apprentices in Bristol in the second half of the C17 were allowed home for treatment with the permission of the Mayor's Court - in 1679 an apprentice smith was allowed home and his master instructed to pay 2s a week until he recovered (Rogers 53).

The Statute of Apprentices stated that for a large number of trades no servant could leave or be dismissed without the approval of two Justices of the Peace, that no servant could be hired for less than a year, and that if a master and servant parted company three months' notice must be given by both parties. A master illegally dismissing servants could be fined up to £2 while an apprentice refusing work or leaving his employment could be imprisoned. Apprentices were also forbidden to leave their birthplace without permission and when seeking employment elsewhere had to have a testimonial. In Bristol the normal practice if an apprentice absented himself without leave was to discharge him and forbid him ever to be given freedom of the city, although runaway apprentices were sometimes imprisoned when caught. Some guilds were less severe than others, however.

There is no mention in the Pipemakers' charter of a policy on dismissal, and such dismissals are rare, or at least are rarely recorded, particularly before the end of the C17. The earliest-noted case is that of Thomas Poyte I apprenticed 6 August 1631 to John and Jane Wall who was dismissed 1 July 1634 and his indentures cancelled (though he is the Thomas Poyte F 1656 listed among the founder-members of the guild in 1652 and still working in 1671). Various forms of termination of apprenticeship appear to have been used. Sometimes (for example, in the case of Richard Jones apprenticed 3 August 1669 to William and Janet Evans) the entry merely said released from apprenticeship or (in the case of George James apprenticed 10 July 1673 to Roger and Susannah Williams) discharged; sometimes there is a bell, book, and candle flavour about the proceedings and discharge was with the consent of the apprentice, his master, his parents (or simply with the consent of all parties), the indentures being cancelled and it being noted that the apprentice was to have no benefit from the part of his apprenticeship served (for example, Thomas Fishpell apprenticed to William and Mary Kinton 19 September 1684).

The increasing use of non-guild institutions to deal with dismissals at the end of the C17 and in the C18 supports Rogers's observations that by this time guilds were becoming unable to assert control without the help of local authority - the first such instances are the cases of John Cherrington apprenticed 14 August 1673 to his father William, whose apprentice-roll entry is stroked out by order of the Mayor and Aldermen with the consent of the apprentice and his master 17 July 1675, his name to be removed from the Tolzey Book and no benefits to be had; and that of William Bruin apprenticed 24 October 1670 to Robert and Margaret Sheppard who was dismissed 16 October 1675 by the Mayor and Alderman with the consent of his master, and had his indentures cancelled and his name crossed out of the Tolzey book, for having been unauthorizedly absent for over one and a half years. Henry Symons, apprenticed 21 February 1680/1 to John and Cecily Tucker, was dismissed by order of the Sessions 12 May 1684; and Richard Redwood, apprenticed to Philip and Anne Calloway 1 July 1706, was dismissed 7 April 1708 by an order of the Justices. From the early C18 the Tolzey court was used to legalize dismissals, changes of master, or termination of apprenticeship - the first instance is 21(?) November 1713 when Benjamin Davis, apprenticed to James Jenkins and his wife 9 May 1709, was discharged by order of the Tolzey. In none of the cases except Bruin's is the reason for dismissal given in the apprentice rolls, but additional details appear in the Tolzey books.

Of Redwood it was recorded in the Tolzey book that he "hath a dislike for the said Trade" and that he and his mother had asked he be released from his master's service, it being understood that he should receive no benefit from that part of his apprenticeship served but could be placed in any other profession; about Davis, on the other hand, it was recorded that he was

> a very disobedient and idle servant and hath divers times run away from his said Masters service and the terms of his apprenticship not being expired hath contrary to his covenant...and the Custome of ye sd City intermarried and thereupon departed from his Masters service & works for his owne hire and gaine.

The most usual reason for letting an apprentice go, however, appears to have been, as was the case with Redwood, that the apprentice was not happy in his trade - as expressed when Alexander Weaver was discharged 5 July 1725 after having been apprenticed to John and Mary Purnell 31 January 1722/3, they had "an utter dislike and aversion to the said Trade". Thus John Short, apprenticed 1 April 1734 to John and Hester Wickham, was on 12 May 1735 also discharged for not liking the trade. The same reason is probably also behind the several terminations of apprenticeship by mutual agreement between the master and the apprentice and his "friends" (those noted in the apprentice rolls as providing for the apprentice as agreed in his indentures): thus Anthony Quinton apprenticed 28 June 1731 to Charles and Mary Hickes and released 18 June 1733, the Samuel Harris apprenticed 30 September 1731 to George and Elizabeth Ebbery and "entirely discharged" 25 November 1736, and John Phillips apprenticed 13 April to the Wickhams and similarly released 29 November 1744.

The number of apprentices a master might employ was left almost entirely to the guilds to settle - the only stipulation in the Statute of Apprentices was that in cloth-making, tailoring, and shoemaking there should be one journeyman for the first three apprentices held and one more for each additional apprentice (Rogers 75). Five years later - 1568 - the Bristol Cordwainers (shoemakers), forced by the Statute to abandon their previous arrangement - 12 journeymen and 3 apprentices to a master - adopted a system allowing each ordinary member one apprentice, each guild warden two, and each guild master three; and versions of this were subsequently adopted by many Bristol guilds. Modifications included restricting two apprentices to wardens who had served in that capacity twice and allowing an additional apprentice towards the end of the senior apprentice's time, the period varying from six months to two years. That these restrictions had a significance even at the end of the C17 is evident from a mason having to discharge in 1701 an apprentice he had over the permitted number; in the 1660s merchant tailors were being fined - £3 6 8 on one occasion - for infractions (Rogers 46-8, 75-6).

The Pipemakers stipulated that a freeman could have only one apprentice; the Master and former Masters of the guild were allowed two but only, apparently, when the apprentice they already had had served at least six of his seven years -

> nor shall any man keep more Apprentices than One Att any One time unless his apprentice in being hath served Six years att least. Then may the Master take another and Soe may one man keep two that has been Master of the said Company....

(It might just be possible to argue that this meant all members could take a second apprentice during the last year of their other apprentice, but that the Master and ex-Masters could have two at the same time - the wording is slightly ambiguous.) Each offence was to be fined 40s, half going to the guild, half to the poor; and the same was to be levied on anyone employing "any woemen or maids or any woemen Stranger" other than his own children (and presumably - certainly on the evidence of the apprentice rolls though it is not specifically stated here - his wife).

Unfortunately, this information is insufficient for Masters or ex-Masters to be identified from the number of apprentices they took. As is noted below, at least some dismissals and transfers are indicated in the apprentice rolls, but there are still a good many apprentices who never appear as freemen and most of whom one must assume died during their apprenticeship - in no instance is the death of an apprentice noted in the apprentice rolls, but obviously such cases must have occurred. Founder-members of the guild were certainly taking apprentices more often than one every seven (or six) years, though the loss of the apprentice rolls for 1658-59 and 1661-67 obscures the pattern. One suspects this particular rule may never have been closely observed, though the re-apprenticeship of James Bull I 8 September 1657 to Flower and Christian Hunt the day after his initial apprenticeship to Thomas I and Elizabeth Poyte possibly indicates the correction of some irregularity in the initial apprenticeship. The entries for the only guild Master known by name, Edward Reed who was Master in 1715, provided no help, for though he took his freedom in 1706 he is not recorded taking an apprentice until 1715. That apprentice, a William Thomas, became free 1722 (he had been originally apprenticed in 1713/4 and transferred to Reed in 1715) so obviously completed his apprenticeship; during the time he was Reed's apprentice Reed took James Machlin apprentice, in 1719. Nothing more is heard of Machlin but in 1723 Reed took another apprentice, William Foord. However, Reed had more apprentices than these, for Thomas Collins F 1721/2 and Thomas Young F 1723 are both recorded as having been Reed's apprentices though their apprentice-roll entries have not been found. There are two cases of makers taking two apprentices the same day: John and Susannah Lee took Robert Carter and Henry Powell apprentice 20 August 1757; and William and Mary Foord received two, Peter Quarman I and Nicholas Corner, transferred from previous masters 22 May 1739.

No mention is made as to the number of journeymen permitted. In the C18 there are an increrasing number of pipemakers who are known to have taken their freedom but who never took apprentices, and most such people probably became journeymen; certainly in a number of instances it is known they remained in Bristol, for they appear in poll-books as pipemakers in the various city parishes. John Frederick Bryant jr (1787: viii) describes his father employing ten journeypeople prior to the Stamp Act of 1765 ruining the export market, which clearly suggests the widespread use of such people and a change from the traditional family business towards a factory industry. Whether the term "journeypeople" implies journeywomen as well as journeymen is not certain - if so it would have been a contravention of the guild rule noted above.

In Bristol the right of apprentices to transfer with the guild's permission was accepted and was a simple practice in constant use, although this was not so everywhere in England. The transfer was generally simply recorded as such, though sometimes a fee was demanded, but some guilds did not allow apprentices to ask for another master.

The Bristol pipemakers' charter makes no mention of policy on this matter, but apprentice roll entries indicate apprentices were simply turned over to a new master and the transfer recorded with the original roll entry. Generally the entry said transfer was made with the consent of the apprentice, his master, a parent or (apparently in the case of orphans) friends, or some combination of these; or by the consent of all parties; or some similar phrase. On two occasions the approval of the guild Master was noted in addition (James Mathews, apprenticed to John and Mary Hunt in 1713/4 and transferred to Ezekiel and Elianor Millard in 1716/7, and James Roach apprenticed to Thomas and Sarah Edwards in 1716/7 and transferred to Henry and Anne Hoar in 1717.)

Sometimes, though not before the C18, the entry indicates transfer was made by order of the Tolzey. The most interesting of these cases is that of John Wit Simmonds, A 23 April 1716 to John and Mary Wilson and transferred to James and Mary Jenkins on 11 February 1717/8. Simmonds had complained to the Mayor and Aldermen that Wilson had

> of late frequently beaten and bruised the s^{d} apprentice in a barbarous and cruel manner without any just reason or provocation, threatening to sacrifice [sic] him, calling him ill names, and cursing him so that he cannot live at peace with his Master but goes in dread of his life of him, the s^{d} John Wilson being often drunk and very passionate,

and that Wilson had not given him food and drink. Wilson had been unable to answer these charges and had been directed to desist from treating his apprentice in this way, but the court, finding he "appeared obstinate and refractory" and receiving testimony of his continued ill-behaviour, ordered Simmonds to be transferred. Nothing is said about preventing Wilson from taking further apprentices, but it is probably significant that though Wilson is noted in 1722 as a pipemaker in the poll-book of that year Simmonds is the last apprentice he is noted as taking.

The Tolzey was involved in other transfers, though none of them involved Wilson's particular problems. In these cases the master had either died or left the city, leaving the apprentice, in the words of the Tolzey book, "destitute both of Instruction and Maintenance"; and the apprentice and his friends had complained to the Mayor and Aldermen who had investigated and ordered the transfer. Friends of John Lee, who had been apprenticed 24 June 1723 to Rebecca Arthurs and turned over 15 August 1726 to Charles and Margaret Buckler, petitioned that Lee be again transferred because both Buckler and his wife had died. This was acceded to 29 May 1729, Lee being turned over to Thomas and Hannah Owen. For similar reasons Joseph Coules, who had been apprenticed 24 June 1728 to Thomas and Sarah Harvey, was turned over 12 October 1734 to William and Mary Nicholas. In the case of John Hercules apprenticed 24 April 1734 to John and Sarah Jones and turned over to James and Mary Jenkins 31 May 1735 Jones had failed in his business and fled the city for fear of arrest, leaving a signed statement dated 22 May 1735 releasing Hercules of his apprenticeship obligations to him; while in the case of Thomas Spencer apprenticed 16 August 1734 to William and Jane Spencer and turned over 8 February 1738/9 to the Jenkinses his master had "failed in his Circumstances and is gone from this City" and his mistress had apparently continued the business but "is since dead", leaving young Spencer "destitute".

As in the other cases, action apparently had to be initiated by the apprentice and his friends and taken before the Mayor and Aldermen. Only in Lee's case in 1729 is the pipemakers' guild mentioned - his transfer to the Owens was made by the Mayor and Alderman with "the consent of the incorporated Company of Tobaccopipemakers witin the said City". When Israel Carey II, who had been apprenticed 11 August 1748 to James and Susannah Carter, was transferred to Thomas and Elizabeth Grant 27 January 1748/9 it was "with the consent of all parties and the Mayor", suggesting the Mayor could act directly. This apparent lack of active guild participation seems strange: one might particularly have expected the guild to have dealt with the Simmonds-Wilson case in 1717/8 before all the dirty linen was washed in public in front of the Mayor and Aldermen, especially when, as noted above, the Master of the guild was specifically noted as approving two transfers of apprentices the previous year which had presumably caused disputes among the parties involved - James Mathews turned over to Ezekiel and Elianor Millard 19 March 1716/7 and James Roach turned over to Henry and Anne Hoar 17 December 1717. (When John Short, referred to earlier, was released from his apprenticeship to John and Mary Wickham 12 May 1735 the signature "Edw Reed" appears at the foot of the Tolzey entry. This may be the Edward Reed Master of the guild in 1715 and last definitely noted in 1723: if so, he may have signed the Tolzey book in 1735 as a guild officer, perhaps because Short himself did not sign, but if so his position is not given.)

The Tolzey court does not appear to have been consistenly used, however - for example, in the case of James Lee noted above his first transfer, in 1726, had been arranged without outside intervention but his second, in 1729, did necessitate court action. When John Barkley, originally apprenticed to Joel and Margaret Williams in 1716, was transferred to John and Mary Purnell in 1719/20 because Williams had failed in business and left, no court action is noted. Again, Thomas Morgan originally apprenticed in 1726/7 to Charles and Margaret Buckler was turned over to John and Rebecca Macey 1729 because Buckler was dead, and no court action is noted. It is possible, therefore, that these court cases really represent situations where the individuals involved had rejected a solution proposed by the guild, though there is no actual evidence for this explanation from the Tolzey book accounts.

Transfers are rarer in the second half of the C17 than later, but this may be because transfers on the death of a master were rarely recorded - there also appear to be more cases of widows continuing their dead husband's business in the second half of the C17 than later. In a number of cases no reason is recorded for the transfer. In no case is any fee noted.

The use of local authorities in these cases and those involving dismissal of apprentices (see above) from the late C17 onwards - the first dismissal in this manner was 24 October 1670 and the first transfer 11 February 1717/8 - supports Rogers's observation that towards the end of the C17 guilds were becoming unable to assert their authority without the help of local courts.

As already noted, the Statute of Apprentices said servants were to be hired for not less than a year and could neither leave (without permission from two Justices of the Peace) nor be dismissed during that year, and that three months' notice from either side was necessary if they wished to part at the end of the year. In fact, these regulations were modified by some Bristol guilds - the period of notice, for example varied from the legal three months to a week and while the period generally applied to both parties the Wittawers demanded three months' notice from employees but gave only one month's (Rogers 74-5). The Pipemakers, however, gave and expected a fortnight's notice, stipulating a fine of 20s if this was not followed, the money to be divided equally between the guild and the poor. Because the Statute of Apprentices decreed only freemen could pursue skilled trades, most Bristol guilds in their C17 ordinances demanded their journeymen be free of the city as well as having served their apprenticeship. As will be noted when dealing with the decline of guilds it was later to be held that the Statute of Apprentices applied only to trades specifically listed in the statute, of which pipemaking was not one, but the Bristol Pipemakers did demand their journeymen be free of the city, masters being fined 20s if found with journeymen not free.

How long it took an apprentice to become a proficient pipemaker producing the three gross or so pipes a day which at least in later times appears to have been the standard daily rate (see 5: 1) is uncertain, and must have varied with the quickness and natural ability of the apprentice to learn, but it must certainly have been long before the seven-year apprenticeship was up. That apprentices were in effect cheap labour is suggested by a case which arose in Southampton, where the widow of a hellier (slater or tiler) complained that an apprentice of her late husband with three years of his apprenticeship still to complete was refusing her any part of his earnings, which normally, one assumes, would have gone to the master. The apprentice was ordered to pay the widow a third of all his earnings in the trade for a year, at which time the case was to be reviewed (Willis and Merson (eds) 1968: xxviii-xxix and xxix n.1).

(2) Election of Officers

Methods used by Bristol guilds to elect officials varied considerably among the organizations. Only the Merchant Tailors, who had a royal charter and thus considerable independence, appear to have approached the oligarchical procedures of London guilds (Rogers 86).

In certain guilds during the C17 only past and present guild Masters could vote, while others allowed votes to their householders and freemen. Others again chose officials by common consent. There were other variations on electing Masters, all with a greater or lesser degree of control by those already in power; generally Masters had to have been Wardens on two or three occasions previously.

Wardens were officials who carried out instructions of the Master and provided and maintained an official link among the various classes in the guild. Again there were various methods of electing them - some guilds allowed the new Master to select the senior Warden while guild members chose the junior, others let the entire membership vote immediately after the appointment of the new Master - the Pipemakers were one of these.

Generally elections were held annually in September or October; non-attendance at elections was normally punished by fine, but there is evidence that at least by the second half of the C17 an active minority was exploiting the lack of interest of the majority (Rogers 86-9).

The Pipemakers held their elections in October - "yearly and every year within one month after the Feast of St Michaell" (29 September) and elected a Master and one Warden. These officials were to take their oaths of office before the Mayor and Aldermen within one week of their election, and refusal or delay to do this was to be fined four marks (53s4d) in the case of the Master and 40s in the case of the Warden, half of the sums going to the poor and the other half to the guild. A Master or Warden found negligent by the Mayor and Aldermen was to be fined 20s to be divided as before.

(The Bristol guild's election of officers was much more democratic than the processes laid down in the various charters of the Westminster-London guild. Their charter of 1619 specified a Master, 4 Wardens, and 12 Assistants. The three petitioners for the pipemaking monopoly were to rotate the position of Master for the rest of their lives, each holding it for a year, and when one died the remaining two to alternate. On the death of the last, Wardens and Assistants were to elect a Master annually. Wardens were to be elected annually from among the Assistants and the latter were in the first place appointed for life with vacancies on death or removal filled by election (presumably from the rank and file). Masters and Wardens after their term of office were to become and remain Assistants (presumably in addition to the 12 already holding office). If a Master or Warden died or was removed while in office a replacement was to be elected for the remainder of the year. A Clerk was chosen for life and on his death the Master, Wardens, and Assistants were to elect a successor. A Beadle or beadles were to be elected (by and from whom is not stated). Election day was the Feast of St John the Baptist, 24 June. The terms of the second charter in 1634 and the third in 1663 followed the same incestuous pattern; the second charter specified 15 Assistants, the third 15 or more. Election day under the second charter was the Feast of St Stephen, 26 December, under the third the Feast of the Annunciation of the Blessed Virgin Mary, 15 August.)

(3) Welfare

Although, as already noted, there was provision for apprentices to go home on sick-leave and even for them to be paid an allowance during this time there is little evidence that Bristol guilds had sickness or social benefits. The Merchant Tailors were almost the only exception, being prepared in the C16 to take over the business of a sick or needy member and reissue his assets to him by indenture (in other words they employed him during his lifetime and the business reverted to them on his death - special arrangements were made for his family). The Merchant Tailors also buried poor members at guild expense and instructed Master and Wardens to visit all sick freemen.

A number of guilds stipulated fines for those not attending a fellow-member's funeral, and in some cases a marriage. Some guilds offered some relief to needy journeymen and two operated almshouses in the city (Rogers 110-1).

Hours of work laid down in the Statute of Apprentices seem to have been generally followed in the C17. Some guilds forbade work on Sundays or church festivals, others allowed limited work (Rogers 109). Feasts and celebrations played their part on guild life - quarter days, election days, and often days of election of guild office and admission to guilds were celebrated by a feast in the guild hall, and there were other occasions as well. In many cases feasts were an expense of the Master, but some were paid by spreading the cost among all members (Rogers 91-2).

(4) Rights of Search

The right of guilds to see that quality production was maintained was acknowledged in Bristol in the C14 (Bickley 1900: I, xxii) and from the early C15 search rights were exercised (Bickley 1900: II, 77, 185).

Some guilds made regular searches at least as late as the second quarter of the C17 and three guild regulations of the second half of the century include search regulations. At the end of the century there were instances of the council using the guilds in cases of quality control, and as late as 1748 the Bakers' Company successfully brought charges against a baker for bread of deficient weight, the culprit being fined 5s per oz of deficient weight to a total of £6 12 6 (Latimer 1893: 272). According to Latimer the Bakers' Company was at that time "zealous in laying informations", many of the fines going to the prosecutors. Search measures had the support of the city council: a constable or serjeant was usually included in the party, which was generally led by the Master or a Warden, in order to secure legal entrance to property. However, some C17 guild ordinances do not mention search rights, and among these were the ordinances of the Pipemakers' guild. Curiously, and not noted by Rogers, the year before these ordinances were formulated, 1651, had seen twice in three days the ignominious rout of a party of Excise searchers by pipemaker James Fox (Nott and Ralph (eds) 1948: 68-9) - this incident is discussed below, but perhaps one can see in the omission of a search clause from the ordinances of less than a year later the fiery opinion of Fox, who was a guild founder-member.

(5) Effect of 17th-Century Royal Monopolies

Patents of Monopoly had been granted in England since the time of Edward III, but in the 80 years between the accession of Elizabeth I and the Civil Wars these privileges had increased in number and scope, being granted to partnerships and companies rather than individuals. The first four decades of the C17 saw the rise of London-based monopolies whose interests conflicted with many provincial guild-run trades.

The effect of these monopolies on Bristol, as noted earlier, seems difficult to judge. A number of writers, including a contemporary talking of 1637, have held Bristol's prosperity was appreciably hit by these monopolies, but Rogers feels (p.174) there is relatively little evidence for this. However, even allowing for exaggerated claims of injury and for Bristolians being "redoubtable expostulators" (MacInnes 1963: 5) it still seems likely that Bristol was adversely affected, even if only to the extent of having to trade clandestinely and by bribery, as was the case with tobacco (1: V). Certainly Bristol soapmaking was largely strangled by the London monopoly, and shipbuilders, vintners, and starchmakers all suffered from London monopolies, though unlike the soapmakers these three were never organized as guilds. Armed resistance by two Bristol starchmakers to London searchers is recorded in 1639 (Latimer 1900: 144-5).

Latimer (1900: 71-2) suggested the monopoly given the Westminster pipemakers in 1619 was keenly felt in Bristol, but on evidence shown earlier there is nothing to suggest a pipemaking industry flourishing before 1619 only to be squashed until the Civil Wars put an end to enforcement of monopolies. The earliest reference to pipemaking in Bristol only occurs in 1619 - it is misleading to cite, as Latimer does (1900: 6), a Bristol ship stolen in 1593 and renamed the Tobacco Pipe as evidence for pipemaking - and while the Westminster monopoly probably made Bristol pipemakers work semi-clandestinely (see above) there is no evidence to suggest it hit a thriving industry, though it may well have inhibited its development prior to the middle of the century.

Nott and Ralph (1948: 5-6) appear to claim the incident involving an excise party and pipemaker James Fox in November 1651 as evidence of Westminster moncpolists exercising their rights[8] but this is not so: the Westminster guild, as related in 3: I, had been dissolved in 1639 and was not refounded until 1663 and in any case the account (Nott and Ralph (eds) 1948: 68-9) clearly indicates the officer who came with two "soldiers of the Governor's Company" was from the "Sub Commissioners for the Collectinge of the Excize of Tobacco pipes, by virtue of a commission to them granted in prosecution of the same accordinge to the Acts, and ordinances of Parliament". Their purpose was to "take a distres" (an act of distraint - confiscation of property) against Fox "for his severall contempts" but they were attacked by Fox with a knife and "most desparate oathes". A constable on hand made no effort to intervene - perhaps not surprisingly, since he was fellow-pipemaker Philip Edwards. Fox threatened to kill the official and in the affray stabbed his wife's hand, and when the official returned with another constable, Fox chased the former "a great wayes in the streete". The Mayor decreed Fox should be put in the stocks "for his bloudy oathes aforsaid" (not, be it noted, for his alleged excise irregularities) but the redoutable Fox again went after the officer, this time with a "paire of prongs". Some six weeks later, the narrator, who was one of the soldiers accompanying the official, making a deposition on the affair, observed, with a certain degree of understatement and the aggrieved air of someone who had lost a cause, that the affair "hath bin a greate hindraunce, and trouble, to the aforesaid Commission".

The issue must have been over some duty not paid, perhaps on exported pipes - what are probably Fox's pipes have been found on several North American sites (see Sub-section VII(b)(4) below). It can hardly have been a concern of the city, to judge by the lack of sympathy shown by city officials to the Excise.

Among the London monopolies noted 3: I was one on the supply of pipeclay - there was in fact apparently contradictory monopolies on this commodity. One ordinance of the Bristol Pipemakers stipulated that no inhabitant of Bristol should be permitted to buy for resale within Bristol and clay used for making tobacco-pipes, the purchase of such clay being restricted to the guild or its members. Offenders of this regulation were to be fined 20s for each occasion, the money to be divided equally between the guild and the poor.

(d) DECLINE

Perhaps the simplest reason for the decline of guilds was that they had outlived their usefulness. Because they made no move towards changing conditions they became more reactionary and more of an anachronism (cf Unwin 1908: 4, 1963 ed and Lipson 1931: 344, 1956 ed). In general the unsettling effect of the Civil Wars and the Commonwealth period caused a sharp decrease in apprenticeship enrollments and a slackening in the enforcement of apprenticeship laws (noted in Willis and Merson (eds) 1968: xli n.1). Certainly in Southampton apprenticeship was declining, aided by a decline in the commerce and population of the town itself, after the 1670s, so that by the end of Queen Anne's reign, 1714, apprentice enrolments there had practically ceased and the last recorded apprenticeship occurred in 1739/40 (Willis and Merson (eds) 1968: xl-xli). In London the decline in the importance of freedom for working in a trade was hastened by need to rebuild after the Great Fire in 1666 which allowed non-London labour uninterested in the demarcations between joiners who made cupboards and carpenters who made shelves to become free (Reddaway 1940: 116-20, 248, 250-5, 306-8, 1951 ed), but as early as 1632 City companies complained that "the freedom of London which was heretofore of very great esteem, is grown to be little worth, by reason of the extraordinary enlargement of the suburbs, where greate numbers of traders and handicraftsmen doe enjoy without charge, equal benifit with the freemen and citizens of London". Nevertheless the City's only solution was unsuccessful attempts to ban, from the 1590s on, "houses on new foundations" and the conversion of old houses to tenements first within three miles of the City walls and in 1657 within ten miles (Reddaway 1940: 42-4, 1951 ed). In the C18 City of London non-freemen were rigidly excluded from retail trade but not from wholesale trade or finance, and certainly by mid-century many merchants and bankers preferred not to take their freedom and avoid the inconveniences of office or fines for refusing office - as George says (1925: 16 and n.4, 1966 ed), freedom involved a "ceremonial which had become antiquated but not yet historically interesting".

By the last decades of the C17 Bristol could no longer effectively keep out traders and manufacturers who were not Bristol freemen - when faced with the alternative of having their premises closed or paying a fine, people chose the latter (Rogers 70). Latimer (1900: 495) notes fines ranging from £8 paid by two wigmakers and a milliner up to £35 paid by a merchant in 1700, while in 1716 and 1717 fines of from £5 to £100 were being levied (Latimer 1893: 116-7). Abuses of the apprenticeship system tended to bring the guilds into disrepute, and because the system was restrictive it caused continual attempts at evasion - there were cases of people nominally registered as apprentices simply to obtain freedom (Rogers 56). Increasing grants of freedom on grounds other than those of apprenticeship - patrimony, marriage, redemption - in the later C17 robbed apprenticeship of much of its meaning, and attempts to restrict granting of freedom in these manners were unsuccessful. In 1677 the rector of St Stephen's successfully petitioned to be made free on the grounds he had many children, was likely to have many more, and that his freedom might benefit them. Similar applications were then granted gratis to two other rectors. The same year a labourer was admitted gratis "to make him capable of an almshouse" (Latimer 1900: 384). From 1680 onwards the number of apprentices admitted bore little relation to the number of freemen admitted seven years later (Rogers 45, 57, 63-7, 188).

The growing practice at the same time of guild members paying fines rather than accepting the financial burden of office and the decline already noted in control exercised by guild courts contributed to administrative weakness. Paying fines instead of taking office appears to have been accepted as acknowledgement that the appointment had been held, thus allowing the privileges regarding the increased number of apprentices allowed for Masters and Wardens to be used. Guild funds benefitted: in at least one Bristol guild - the Mercers' and Linendrapers' - it was possible in the second half of the C17 to pay a fine and be exempted from office for as much as ten years. The resulting shortage of willing members allowed or forced - depending on their inclination - those willing to take office to do so many times: one wire-drawer was Master ten times. Fines filed because the wealthy could pay, leaving the burden and expense on poorer members. Decline in prestige and power was inevitable in such circumstances (Rogers 113, 92-3).

By the beginning of the C17 the Statute of Apprentices was being held as applicable only to skilled trades (Lipson 1931: 281-2, 1956 ed), - Coke strenuously opposed it along with monopolies and guild charters supported by royal charter (C. Hill 1965: 235 and n.5, 243, 233, 1972 ed) - and in 1669 it was described as "by most judges looked upon as inconvenient to trade and to the increase of inventions". In the next century it was held the Statute was non-retroactive - trades not specifically noted in it were exempt from its provisions (Ashton 1955: 234-5, 1961 ed) - and criticism was forthright: "that absurd Statute of the Fifth of Elizabeth, which restrains persons from exercising those very trades they may have the happiest genius for" was one comment (both quotations in Lipson 1931: 281, 294, 1956 ed). By the beginning of the C18 Parliament had abandoned enforcing its provisions and a parliamentary committee in 1751 strongly criticized the Statute.

Local authorities, however, tried to maintain its provisions because their interests and those of the guilds were the same - to maintain the status quo, generally on a restrictive basis - and as guilds declined in importance local authorities more and more attempted to enforce the Statute by fines and legislation (Lipson 1931: 277-94, 1956 ed: cf Trevelyan 1942: 322 n.1, 1946 ed).

In Bristol, as already noted, the council was taking over judging of local disputes from the guild courts towards the end of the C17, and there were repeated attempts well into the second half of the C18 to force those trading or setting up business in Bristol to become freemen. In 1716 and 1717, for example, there was a regular hunt to track down such persons and force them to pay for their freedom (Latimer 1893: 116-7). By 1731 when the city authorities again attempted to enforce freedom, the climate had sufficiently changed that the authorities were able to obtain only one successful prosecution (Latimer 1893: 176), but arriere-garde as ever the Council was resolving in 1733 that no-one living outside the city be made a freeman "upon any consideration whatsoever" - a move according to Latimer perhaps intended to discourage merchants from living in Clifton and other suburbs - was fining a non-freeman for hawking in 1736, and conducting a hunt for non-freemen "foreigners" at the end of 1738 after a particularly blatant case of flouting the law. In 1746 a solicitor was fined and in 1748 a tinplate worker; in 1757 a rich Jewish dealer in gold and silver was prosecuted. As late as 1762 and 1765 there were hunts for foreigners but the unsuccessful prosecuting under the Statute of Apprentices by the Bakers' Company in 1772 of a baker who had not served seven years' apprenticeship appears to have been the last attempt to enforce trade monopolies - the baker triumphantly continued to undersell the guild and started a mill to defeat a combination of millers, and his family acquired a fortune (Latimer 1893: 186-7, 197, 214-5, 260, 327, 356, 401).[9] Until the end of the C17 Bristol had made great efforts to keep herself economically independent (Rogers 42-3), and in the early C18 Defoe in his A Tour through England and Wales (first published in the 1720s, quoted in Little 1954: 154, 1967 ed and in Marcy 1966: 6) scathingly criticized the Bristol council for restricting advancement of non-Bristolians, listing as the city's greatest inconveniences

> its Situation, and the tenacious Folly of its Inhabitants; who by the general Infatuation, the Pretence of Freedoms and Privileges, that Corporation-Tyranny, which prevents the flourishing and Encrease of many a good Town in England, continue obstinately to forbid any, who are not Subjects of their City Sovereignty (that is to say, Freemen) to Trade within the Chain of their own Liberties;

and claimed Bristol could double its size if it did not take this attitude (quoted in Marcy 1966: 6; cf Little 1954: 154, 1967 ed). By the time the eighth edition of Defoe's work was published in 1778, however, its editor felt able to say that "All kinds of persons are free to exercise their trades and callings here, without molestation from the corporation; and if poor, they may, if they please, purchase the freedom of the city for a very moderate sum" (quoted in Marcy 1966: 7), a quotation echoed, indeed copied, in Reed's New Bristol Directory of 1792 (cf Matthews 1794: 49). Thus between 1772 and 1778 the old order appears to have finally fallen, after a rearguard action extending over three-quarters of a century. (Events in Southampton took a similar course at this time. There the Corporation fought to have all shopkeepers freemen "strongly for the first twenty years [of the C18], then more feebly for another decade, after which followed a pause and a final effort in the 1740's" (Patterson 1966: 23; for details see ibid. 23-25, 35-36).)

Guild control, whatever its benefits, was clearly restrictive and one which had adverse influence on a city's economy (Lipson loc. cit. and Rogers passim). In 1779 it was observed that "Almost in every town in England where trade flourishes greatly, they never ask whether a man has served his apprenticeship" (quoted in Lipson 1931: 292, 1956 ed; cf Ashton 1955: 223-4, 1961 ed), the growing prosperity of Midland and northern towns being instanced. The beginning of the decline of Bristol guilds, as Rogers's study shows, was the later C17, and it is against this background that one must set the origin and organization of the Bristol pipemakers' guild.

Of the history of the Bristol Pipemakers' Guild after its founding in 1652 virtually nothing is known, as their charter of incorporation is the only known surviving document relating to them.[10] Unlike the charters of the Westminster-London guilds, that of the Bristol guild does not indicate who the original officials were. If the order of names of founder-members given in the charter (see above) is any guide - assuming the Master and Warden had been elected prior to the submission of the charter for approval - then Humphrey Partridge would have been the first Master and Philip Edwards sr the first Warden. A reference in the apprentice rolls notes Edward Reed (A 1699, F 1706, fl 1723) was Master in April 1715 - William Thomas, A 7 January 1713/4 to Thomas and Anne Watts was transferred to Reed and his wife Mary on 5 April 1715 to finish the remainder of his term. Assuming officers were still being elected annually within a month of 29 September, Reed must have been Master for the year 1714-15. On 19 March 1716/7 there is a reference to the consent of the Master to the transfer of James Mathews, A 2 March 1713/4 to John Hunt, to Ezekial Millard and on 17 December 1717 similar consent was given to the transfer of James Roach, A 7 January 1716/7 to Thomas Edwards, to Henry Hoar, but on neither occasion is the Master named. As these appear isolated instances there may have been problems needing a decision from the Master. The consent of the Guild is noted when James Lee, originally A 24 June 1723 to Rebecca Arthurs and later transferred to Charles and Margaret Buckler, was re-apprenticed 29 May 1729 to Thomas and Hannah Owen.

In his trade directory for 1793-4 Matthews notes (1794: 49) the Pipemakers among 24 Bristol guilds, but he also notes that "some of their trades are nearly extinct, others are dissipated", leaving it uncertain as to whether the guilds were still alive in every case. Elsewhere (1794: 41) he refers to "Tobacco-pipes which...are exported in great quantities", when in fact other evidence (see Section VII(b)) indicates that the Stamp Act troubles of 1765-66 and then the American Revolution starting 1775 precipitated the collapse of the Bristol pipe-industry by disrupting its North American trade and the freedom rolls give the period 1791-1800 as the only decade between 1640 and 1840 when not a single pipemaker took his freedom, which suggests Matthews's information was out of date by 30 years or more. Certainly, the first third of the C18 was the high period of the Bristol pipe-industry, and it would be unlikely that the guild disappeared during that period; however, there was a distinct decline in the size of the industry after ca.1740, and it is quite possible the guild died during the last quarter of the century.[11]

The records are known of only one or two city companies - in the case of the Tailors, the senior and richest city company, between 50 and 70 members attended their annual meetings at the beginning of the C18, but by 1757 attendance had sunk to 27, by 1777 to 20, by 1797 to 6, and when shortly after it had been reduced to 2 they elected each other Master alternately until 1815 when one individual elected himself and continued to do so until his death in 1824 (Latimer 1887: 311; 1893: 181). The Mercers numbered about 40 at the beginning of the century but no mention of their hall occurs after 1718 (Latimer 1893: 181). The Innholders' Company was gradually dying from the 1730s and the Barbers' Company from a little later, though the latter was still alive in 1767 (Latimer 1893: 189, 219, 381). The Coopers' Company was apparently active enough to extort a good price in 1742 for its old hall, when the Council wished to demolish it for thoroughfare widening, and to build a new hall (Latimer 239), and it sold land in 1764 for part of what was to become the Theatre Royal (Latimer 364); but its hall was up for auction in 1785, as was that of the Smiths' Company the following year (Latimer 447-8). Also in 1786 the Weavers' Company, now so small as to be no longer able to maintain their hall, sold it (Latimer 370). Matthews, though his information does not always appear to be up to date, noted in 1794 that the Merchant Tailors and Coopers were still wealthy guilds when he was writing, but that the Weavers, the Tuckers, the Bakers, and the Smiths had all given up their halls, "proper signs of the downfall of trading combinations and monopolies" (W. Matthews 1794: 49).

An incident in 1772 (Latimer 401) indicates the Bakers' Company was still alive at that time, though the event in question was its failure to successfully prosecute a non-member for underselling the members, a failure which it probably did not long survive. The Carpenters' Company was still alive in 1766 (Latimer 371-2), and the Chandlers' and Soap Boilers' Company was issuing from its hall a reward for information on smuggled Irish soap and candles as late as 1768 (Latimer 364). Matthews, talking of the 24 Bristol guilds, mentions their halls, formalities, flags, and gowns (1794: 49); the Pipemakers' charter implies they had a hall, but there seems no other evidence for this latter. It is probably more likely they simply rented premises, or used an inn, or met in members' shops or houses.

Incidental references in Latimer indicate the Council continued to exercise authority over the guilds, however moribund the latter had become. In 1730 the Common Council approved new ordinances for the Carpenters, and in 1732 appointed a committee to consider charges levied by the companies when admitting new members, allegations having been made that these were in many cases excessive (Latimer 1893: 181). While no further mention appears of this committee or of any action of the Council on this occasion the latter did in September 1747 forbid the Carpenters' Company to levy fines of £20 on prospective carpenters and ordered fines to be kept at £5 (Latimer 268). The Innholders' Company complained to the Council in August 1734 that it was unable "to preserve their ancient rights and customs from want of good laws, orders and customs" and a committee was appointed to draw up ordinances; while a complaint - apparently inaccurate - was made in September 1738 about an ordinance of the Butchers' Company, whose ordinances had been approved as recently as 1714, and a committee was appointed to investigate this also.

In 1739 a number of peruke-makers and barbers, freemen of the Barbers' Company, presented a petition to the Council complaining of "diverse impositions and grievances" imposed on them by the surgeons, who by a medieval anomaly were still members of the Barbers' Company; the Masters and Wardens of the guild counter-petitioned expressing surprise that the Council should be importuned by such unfounded allegations from "uneasie members" and a committee was to investigate this, but none of these committees ever reported (Latimer 189, 211, 219). In 1758 at the swearing-in of the Master of the Barbers' Company "the Mayor was pleased to take notice to them of the scandalous practice of shaving on the Lord's Day, desiring the same might be suppressed", and after warnings were issued several convictions were subsequently recorded (Latimer 1893: 336). In 1738 there was a case of a baker who had been flouting both the Bakers' Company and Council directives and who was only with difficulty overcome (Latimer 214-5) and in 1754 the Chandlers' and Soap Boilers' Company prosecuted a ship's captain before the local magistrates who fined him for having some soap from Ireland on board (Latimer 312-3), two incidents which show how guilds relied on local courts for help.

SECTION III:
TRENDS IN PIPEMAKING APPRENTICESHIP AS SEEN IN THE APPRENTICE-ROLL ENTRIES, 1619-1827

Examination of the pipemaker apprentice entries in the apprentice rolls over the more than 200 years such entries were made shows certain trends evolved.

The traditional seven-year apprenticeship was very largely adhered to throughout the history of the industry until the last pipemaker apprentice, Thomas George, was apprenticed to his namesake 13 July 1827, but the formative decades of the guilds saw a number of non-standard periods, of both more and less than seven years. These non-standard periods were relatively common into the 1660s but died out before 1700.

In the 1620s, 1630s, 1640s, 1650s, 1670s and 1680s there were apprenticeships for eight years, and in the 1620s and 1640s one each of nine years (as noted earlier, the apprentice-roll entries for 1658-59 and 1661-67 are missing). The last eight-year apprenticeship was that of Henry West, apprenticed to Anne widow of Thomas Smith 23 September 1689. The most common way of extending the period an apprentice stayed with his master, however, and one particularly common in the 1650s, was to add a covenant year. In two cases two covenant years were added, in another, four. Often, but not always, pay either in money or clothes or pipemaking tools was given for these extra years. The last times this form of extension was used were when Richard Saunders was apprenticed 25 June 1677 to William and Mary Kinton for seven years and one covenant year and Nathaniel Chilton was apprenticed 26 February 1695/6 to John and Mary Sinderling for seven years and six covenant months. Thomas Addison was apprenticed 6 May 1689 to James and Anne Abbott for eight years with a payment of 5s for the last year, which suggests the eighth year was effectively a covenant year.

Some examples of the use of the covenant years are as follows: John Williams was apprenticed 27 March 1624 to Samuel and Elizabeth Lewis for nine years plus a covenant year on completion of which he was to be paid 20s; Bartholemew Elliott, apprenticed to Edward and Elizabeth Lewis 20 March 1632/3 was to receive no payment for his extra year (in this case not actually termed a covenant year) which he served after an eight-year apprenticeship but was to receive "for interest" tools to the value of 20s; James Bull I apprenticed 7 September 1657 to Thomas and Elizabeth Poyte for seven years and one covenant year was to have one suit and a cloak, worth £3, for his covenant year. Daniel Billinge, apprenticed 7 April 1631 to Edward and Elizabeth Lewis for seven years, was to serve an extra year (again not termed a covenant year) and as in Elliott's case it was specified there was to be no payment for this year - unlike Elliott, however, Billinge was not offered tools as compensation. When John Sinderling was apprenticed 5 December 1653 to Flower and Christian Hunt for seven years and one covenant year the Hunts agreed to pay Sinderling's freedom fee - 4s6d - and give him double apparel, and for the covenant year pay him £3 or a mule worth that plus a cloth cloak. The mule would have been more useful than might appear at first sight, for as noted later (Section VII(a)(1) below), a horse, bridle, a pair of hampers, and a pack-saddle are listed in a 1727 inventory of a deceased Sussex pipemaker and two inventories of deceased Lincolnshire pipemakers, one of 1671 and the other of 1728, list horses, bridle, and various types of saddles and hampers, clearly suggesting these makers made rounds on horseback selling their products. Sinderling would have used a mule similarly. Nicholas Stokes was unfortunate enough to be apprenticed to one of the William Evanses 29 December 1669 for seven years and no fewer than four covenant years, with no payment for them noted, while John Reynolds, apprenticed 19 May 1656 to John and Cicily Calloway for seven years and two covenant years was to receive only 2d (!) for these two years. However, Evan Dyer, apprenticed 2 April 1670 to Richard and Anne Nunney for seven years and two covenant years was to receive 30s.

The meaning of these additional years is not clear. The Statute of Apprentices stated that an apprentice could not become free before he was 24, which would normally mean apprenticeship would start at about 17; and it is possible that youths younger than that age were either apprenticed for more than seven years or had a covenant year added, or a combination of both in order to bring the age at which they would gain their freedom up to about 24. Merson, discussing the Southampton apprentice records, notes (Willis and Merson (eds) 1968: xviii-xx) a steady trend towards a uniform seven-year apprenticeship term there over the period between the 1610s and the 1670s, and that this fits the pattern known to have prevailed generally in England after the middle of the C17. Many guilds in English towns, he notes, had a minimum age at which apprentices could be taken which was usually 14 though sometimes as young as 12 or as old as 16, and it seems probable that the age of 24 for obtaining freedom was not observed and that 21 was a general age for freedom. The Poor Law of 1601, however, permitted poor boys to be apprenticed until they were 24, and at Southampton at least orphans tended to be apprenticed for longer than other apprentices - in one case an orphan boy was bound in 1661 for four covenant years before commencing a seven-year apprenticeship because he was "very younge" (Willis and Merson (eds) 1968: lvi-lviii). No doubt in Bristol too, 21 rather than 24 became the approximate age at which freedom could be taken, and the older tradition (perhaps not unconnected with the exploiting of cheap labour) of long apprenticeships died out - the published Bristol apprenticeships for the years 1532-42 (Hollis (ed) 1949: 15) indicate apprenticeships at that time were consistently more than seven years, lengths as high as 16 years being noted. The fact that covenant years were most popular among Bristol pipemakers in the 1650s certainly indicates the newly-formed guild deliberately used it and that the city authorities allowed it.

Four instances of apprenticeships for less than seven years are noted. Each of them uses the form "for a third of" (pro tercio) a number of years and two involve the same master. The significance of the formula "a third of" is unknown. George Hillman was apprenticed 18 September 1650 to Robert and Suzanne Powell for a third of seven years, Thomas Jones was apprenticed 1 October 1650 to John and Elizabeth Calloway for a third of 11 years, Peter Calloway was apprenticed 22 April 1651 to his brother and sister-in-law John and Elizabeth Calloway for a third of seven years, and William Kinton was apprenticed 10 September 1657 to Jane widow of John Wall also for a third of seven years. Young Calloway was also to serve one covenant year, but was to receive at the end of his term one cloak, one vestment, "or 50s in hard cash" (vel ls. in pecunia numerata). Why such short apprenticeships should have been arranged is difficult to explain, particularly when Jones's term was a third of a figure larger than the normal seven years and Calloway was to serve a covenant year after his reduced apprenticeship. It is just possible, in view of the close spacing of the first three - two pipemaking apprentices in succession and three out of four such successive entries - and their occurrence during the period when the city authorities were building up their pipemaking strength preparatory to forming the guild, that these three represented a "crash programme" for producing potential freemen. If so, the idea failed, for none of the three is recorded ever taking his freedom. Kinton duly took his freedom, but not until seven and a quarter years after he had been apprenticed. Whatever the reason, the formula was not used again, and these four instances are the only occasions pipemaker apprenticeships were for less than a seven-year period.

Towards the end of the C17 a new trend which was to become common practice in the following century appears. This is the requesting of the parent or guardian of an apprentice to supply items towards the maintenance of the apprentice during his term and is part of a country-wide trend in apprenticeships during the C17 (see Willis and Merson (eds) 1968: xx-xxi).[12] Hitherto the master and his wife had been responsible for providing for and maintaining their apprentice, standing as they did in parentum loco, but now first various articles of apparel and by the early C18 money is recorded as being given the master in return for taking apprentices.

The first instance of clothing being given occurs 17 September 1688 when Charles Chick is apprenticed to John and Mary Sinderling for seven years, his father promising to deliver one suit of apparel at the end of his son's second year as an apprentice. Two months later, 15 November 1688, William King was apprenticed to Francis and Alice Russell for seven years, King's father promising to find apparel. The following year, 4 September 1689, Edward Randall son of Edward Randall pipemaker deceased was also apprenticed to the Sinderlings for seven years, his mother also agreeing to supply an entire set of apparel at the end of her son's second year as an apprentice. When William Morgan, whose father though not his mother was dead, was apprenticed 9 November 1693 to one of the William Evanses and his wife Mary for seven years friends were to find apparel for him. (In the Southampton apprenticeship records the term "friends" occurs in agreements where the apprentice's father is dead, and may, as Merson notes in one instance, have been the dead father's executors (Willis and Merson (eds) 1968: xvii); but certainly among Bristol pipemaker apprentices, friends were cited frequently when there is no indication of the father being dead). There was a rather curious arrangement when Nathaniel Chilton was apprenticed 26 February 1695/6 to the Sinderlings: he was to serve a six-month covenant term in addition to his seven years' apprenticeship and his master and mistress were to find him apparel during his term and also "double apparel" (possibly for his covenant period though this is not specifically stated) but at the same time friends were to deliver to his master and mistress at the end of the first two years a complete set of apparel with hat, shoes, stockings, and linen.

One cannot help feeling that the Sinderlings were on to a good thing here, being the first pipemakers to use and use repeatedly this method of clothing their apprentices. In this last case John Sinderling died when Chilton was half-way through his apprenticeship, for Chilton was transferred 7 November 1699 to Joseph and Jane Stanford and Sinderling's death is noted as the reason for the transfer. When John Beaton was apprenticed 29 April 1700 to Robert and Sarah Browning for seven years rather specific terms were laid down - Beaton's father was to provide one suit of apparel after 2-1/2 years and the apprentice was to have at the end of his term three suits of which his original was to be one, the one his father supplied to be another, and the third was to be of new broadcloth and supplied by his master. The reference to his having his original apparel is interesting not only because it indicates a suit was expected to last that long but also because it may have been specified to make sure the master did not attempt to keep the original suit.

The last occasion on which it is recorded that a master taking a pipemaker apprentice made a contribution in cash or kind towards the upkeep of the apprentice occurs in 1704, when John Lewis, taking John Bonner apprentice 22 July, undertook to give Bonner a new suit of clothes or 40s in lieu at the end of his term. From the 1710s onwards it was becoming progressively more common right into the C19 for friends not only to find apparel but to undertake its washing (refrences to apparel and lotion, or simply lot). The first time this occurs is when Francis Payton is apprenticed 20 November 1717 for seven years to Thomas and Anne Harvey; it occurs with four of the last six pipemaker apprentices recorded, who cover among them the period 1795 to 1827. In two instances, with John Horley apprenticed to George and Anna Viner 6 November 1756 and Henry Powell apprenticed to John and Susannah Lee 20 August 1757, friends were to look after mending as well as washing. However, in the 1780s and 1790s there are four instances where the master was to find apparel and washing: these were John Lewis apprenticed 13 December 1783 to John Carey, Isaac Davis apprenticed 15 January 1787 to John and Martha Okely, John Adams apprenticed 2 April 1792 to John and Mary Carey, and Whitson Moore apprenticed 22 June 1792 also to the Careys. Probably by coincidence, they form a group of four successive pipemaker apprenticeships. In the case of the last pipemaker apprentice, Thomas George II apprenticed 13 July 1827 to his grandfather Thomas George I, the master was to find "everything" - this, however, may have been as a favour within the family.

There is one case of an apprentice coming out rather well on an agreement on clothing. When Ezekiel Millard was apprenticed 18 January 1705/6 to John and Margaret Harvey it was agreed that he should find his own apparel during his apprenticeship and that in return the Harveys should pay him £2 15s per annum. This seems quite a high sum, particularly as it was to be paid for each of seven years; in fact something happened to Millard's apprenticeship, for when he took his freedom on 10 December 1713 it was by permission of the Common Council on the grounds that he had served part of his apprenticeship to Harvey.

Occasionally the shoes and stockings were apparently supplied by the master and mistress - in the cases of Alexander Weaver apprenticed 31 January 1722/3 to John and Mary Purnell for seven years and Thomas Morgan apprenticed 20 January 1726/7 to Charles and Margaret Buckley friends were to supply apparel excluding shoes and stockings. On the other hand, when Mathew Gethling was apprenticed 25 May 1715 to James and Katherine Abbott the only item his friends were asked to supply was stockings (caligar'). Morgan had an unusual apprenticeship for it appears his friends were also to supply food and drink (venital & Galer). A cash payment also came with Morgan (see below), the figure 13 being given but whether pounds or shillings is not stated (though to anticipate the discussion below £13 would be appreciably the highest amount given with a pipemaker apprentice and about five or six times the normal sum paid with pipemaker apprentices in the earlier C18). To complicate matters Morgan was transferred to John and Rebecca Macey 16 May 1729 as Buckler had died.

There appears to have been no set manner in which the various conditions were arranged, and it may have been by private agreement and bargaining. When John and Susannah Lee took two apprentices the same day, 20 August 1757, the agreement with Henry Powell was that friends should arrange for washing and mending while that with Robert Carter had no special arrangements; in neither of these particular cases was a payment made.

What happened in practice to original agreements as to pay for covenant years or promises of clothing or other items from the master when he subsequently died is uncertain. The Tolzey book entries in the earlier C18 relating to transfers of apprentice certainly state that both the master and the apprentice were to abide by the agreements made in the apprentice's original indenture, but the problem must have been particularly acute when payments had been made to the first master, an arrangement which tended to be an alternative to demands for clothing though there are a number of cases of both clothing and money being given.

The first instance of money being paid with a pipemaker apprentice occurs 26 September 1713, when William Thomas was apprenticed to Robert and Sarah Tippett for seven years and £5 was paid with him. Two months later, 17 November 1713, Anthony Baily was apprenticed to John and Eleanor Macey for seven years, with friends finding apparel and a payment of £2 coming with the apprentice. Subsequent entries clearly indicate that such payments rapidly became common when arranging apprenticeships, and were not confined to pipemaker-apprentices. On 2 May 1715, for example, Edward Hale, son of Isaac Hale pipemaker, was apprenticed to a house-carpenter with friends to find apparel and a payment of £15 with the apprentice and on 18 October 1738 Joseph Macey, son of John Macey "late of Bristol" pipemaker, was apprenticed to a joiner with a payment of £14 - much higher sums than any made to a pipemaker when taking an apprentice and if paid by the fathers or their estates suggesting they had flourishing pipemaking businesses (the earlier C18, as is noted below, saw the height of prosperity of the Bristol pipemaking industry). The widespread adoption of such payments is also indicated by the appearance of trusts or charities which disbursed payments for apprenticeships and other deserving causes, such as lying-in mothers.

The first example of charitable grants to pipemaker-apprentices occurs 20 September 1716 when Thomas Owen was apprenticed seven years to Henry and Anne Hoar and £5 10s was paid with the apprentice, of which 10s was "the gift of the late Queen Elizabeth" (presumably Elizabeth 1, though there is no explanation for this intriguing gift; subsequent entries suggest the gift was probably through the Queen Elizabeth Hospital). The first example of a gift of money entirely from a charitable source to go with a pipemaker apprentice occurs 18 June 1717 when Richard Gill was apprenticed to Philip and Alice Calloway for seven years and £10 charity money "the gift of Edward Colston Esq" was paid with him. Thereafter, such payments become frequent, though £2-£3 is the most common amount until the later C18, when a number of up to £10 are noted.

A prominent source of funds was the charity of the Elizabethan Bristolian, Alderman Kitchen, which first appears assisting pipemaker apprentices 4 May 1721 by adding £2 to £4 from the "Parishoners of the Parish of St Mary Redcliffe" when William Reece was apprenticed to John and Eleanor Macey for seven years. In the first ten years in which Kitchen's assistance is noted for pipemaker apprentices (1721-30) eight grants, all of £2, were made. These 8 covered almost a quarter of the 34 pipemaker apprentices registered during this period. In all, grants from Kitchen's charity - all for £2 each - were given with 22 pipemaker apprentices between 1721 and 1795.[13]

Other sources of money are ex publico dono and "charity money", which occur several times; the Public Charity of the Society of Men(?) of the County of Somerset (£6 with Richard Chaffey A 29 June 1719 to John Squibb); John Harrison Esq (£5 with Thomas Spendar A 16 March 1719/20 to John and Eleanor Macey); Samuel Perry, baker, deceased (£5 with John Tippett A 6 November 1723 to Charles and Mary Hickes); the Parishoners or the Public Charity of the the Parishoners of St Michael Within and also of St Thomas (£5 with John Jones A 16 October 1725 to Mathew and Hester Shingler and £4 with James Stephens A 25 April 1726 to John and Charity Fryer); the Society of Antient [sic] Britons in the City of Bristol (£10 with John Thomas A 21 April 1733 to John Purnell); the Queen Elizabeth Hospital (£10 with John Newton A 29 June 1743 to William and Elizabeth Nicholas); the Gloucestershire Society in the City of Bristol (£2 with John Iles A 16 September 1747 to George and Elizabeth Ebbery); the parish of Clifton (£2 with Frederick Baker A 7 May 1751 to James and Rebecca Stephens); the gift of Mr Perry deceased to the poor of the parish of St Philip and St Jacob (£5 with Edward Hunt A 24 March 1757 to George and Anna Viner); the Somerset Society in Bristol (£10 with William Russell A 8 December 1757 to William and Elizabeth Commons) and the Grateful Society in Bristol (£10 with Isaac Davis A 15 January 1787 to John and Martha Okely). In the case of the Queen Elizabeth Hospital a number of grants were made by them from individual gifts made to that institution. Latimer (1893: 183) notes the annual feast of various county societies such as the Somerset and Gloucestershire societies noted above and that of the Antient Britons which comprised expatriate Welshmen, the subscriptions to such societies - those for Wiltshire and Herefordshire are also noted - being generally put, as here, to paying apprentices' fees. The Wiltshire Society's feast involved a procession to Christ Church to hear a sermon and a dinner in the Merchants' Hall. The Grateful Society was established in 1759, its promoters being supported by those who had been educated at Colston's School, and the proceeds of an after-dinner collection were put to apprenticing freemen's sons and relieving real distress (Latimer 1893: 280). Edward Colston, the prominent Bristol philanthropist, died in 1721 in his 84th year

(Latimer 1893: 129).

The payment of a grant with an apprentice appears to have been general in the C18. Two sources dated 1747 (Campbell 1747: 337, 1969 ed and Waller's *A General Description of All Trades* cited in Oswald 1970b: 230) note pipemaker apprentices being taken by London masters for sums up to £5, though in some cases they were taken free; and Oswald, checking the London apprenticeship rolls of about this period, notes (1970b: 230) that the minimum payment with a pipemaker apprentice seems to have been £2 and the maximum £20, figures which are low when compared with those of up to £80 being paid with tobacconist apprentices. Random figures given by Oswald for various English centres from the 1710s to the 1760s suggest these payments were widespread if not universal by this time.[14] When the Bristol pipemaker Anthony Baily and his wife Hester took their son Anthony apprentice 14 December 1743 the father received £10 from Colston's charity, indicating a father could obtain a grant to take his son apprentice.

There is some evidence that merchant apprentices in Bristol had to have a premium paid by the father to the master (McGrath (ed) 1955: xi, 1968 ed; McGrath 1970: 5-6) but pipemaker apprentices certainly did not; evidence from the Southampton apprenticeship registers indicates that at least some merchant apprentices there had a similar premium paid with them but there is no evidence for such payments with apprenticeships to handicrafts (Willis and Merson (eds) 1968: xvii-xviii). At Southampton it appears that grants were given with poor apprentices long before they became usual in private apprenticeship contracts, and this is said to be usual in England (noted in Willis and Merson (eds) 1968: lix). In sharp contrast to the Bristol evidence, however, or at least to the evidence from Bristol pipemaker apprentice entries, are the statements (noted in *op. cit.* xliii-xliv, lxvi-lxix) that funds for apprenticing poor children were being set up by wealthy individuals from the 1560s onwards and reached a high-water mark about the 1650s: such funds are being recorded in Southampton apprenticeships from the 1610s, but as noted above they certainly are not being recorded for Bristol pipemaking apprentices before the 1710s, after which time they rapidly became common. (No systematic attempt was made to examine the Bristol apprentice rolls on this point, but entries which noted pipemakers' sons being apprenticed into trades other than pipemaking were noted, and none of these had payments recorded before the 1710s either.)

The first third of the C18 saw the zenith of the pipemaking industry both numerically and, as will be discussed later, in trade. The first signs of an over-saturated market for pipemakers appear in this period too, the poll-books as noted below indicating an increasing number of Bristol pipemakers leaving the city and heading particularly to the London area from 1734 onwards. Indications of this also occur in the apprentice rolls, three cases of transfer of apprentice being recorded because the previous master had "failed and gone off" are recorded in this period. Joel Williams, F 1713, failed and left the city sometime between September 1716 and February 1719/20 (presumably near the latter date) for John Barkley apprenticed to Williams and his wife Margaret at the former date was transferred to John and Mary Purnell on the latter date. (Williams, however, was back in Bristol by 1722 according to the poll-book of that year, where he is listed as voting from St James parish. He is listed there as a pipemaker, but probably all this need mean is that his qualification to vote was that he had taken his freedom as a pipemaker; as is indicated later (pp528-9), the poll-books appear to have listed the trade in which the voter had taken his freedom and not necessarily his occupation at the time he voted.) The Tolzey book records John Jones, F 1733, "hath failed in his Circumstances & absconds for fear of being Arrested" when his apprentice John Hercules was transferred 31 May 1735 to James and Mary Jenkins - Jones's signed release of Hercules was dated 22 May suggesting he had fled immediately after that date. William Spencer F 1734 had failed and left the city some time before February 1738/9, apparently leaving his wife to carry on as best she could, for his apprentice Thomas Spencer (apparently a younger brother) was transferred at this time to James and Mary Jenkins and the Tolzey book entry indicates William's wife had continued after his departure but had subsequently died, leaving the apprentice unprovided for.

FIG 146 illustrates in bar-graph form the number of pipemaker apprentices taken in Bristol over the period 1619-1827. Although the loss of the apprentice rolls for 1658-59 and 1661-67 makes figures for these decades incomplete, it is quite clear that the active period of Bristol pipemaking, at least so far as taking apprentices goes, was from the 1650s to the 1730s, the decade 1681-90 having the most apprentices of all, 49. The later 1730s hint at a decline in the number of apprentices taken, and by the middle 1740s this decline is very evident. Thereafter, with the exception of the isolated year 1757, when five apprentices were taken including two on the same day to John and Susannah Lee, pipemaking apprenticeship declines very rapidly, and by the 1760s can be said to be for practical purposes dead. That the decline ca.1740 is sudden is suggested by a comparison between the number of those apprenticed for the decade 1731-40 and those for the decade 1741-50: while 30 are noted for the former only 13 are noted for the latter. The apprentice rolls do not indicate any reason for this sudden contraction, but as the section below dealing with trends in pipemaking visible in the freedom rolls will note, there is indeed a major contraction in the Bristol industry at this time. Whatever the reason, the effect may be guessed at: a lessening in the number of apprentices taken will result in a lessening in the number of future pipemaker freemen and journeymen and cause the ultimate demise of the industry as older workers die. Other evidence suggests that towards the end of the C18 this was indeed what was happening, though it was aided by the economic crises caused by the Stamp Act and the American Revolution; and when the Bristol pipemaking industry revived in the early C19 it owed very little to the now-dead laws about apprenticeship and freedom.

Only 3 of the last 14 apprentices taken, who covered the period 1764-1827, took their freedom as a result of having served out a pipemaking apprenticeship, though four others - Henry Wickham A 7 January 1765 to John and Susannah Lee and F 10 September 1774, Henry Carey A 13 January 1766 to Edward and Mary Sinderling and F 9 March 1768 (!), William Showell A 16 November 1776 to Israel Carey and F 19 April 1784, and John Adams A 2 April 1792 to John and Mary Carey and F 1 October 1812 - all took their freedom by virtue of having a father who was a freeman in another trade. This is probably a fair indication of the state into which apprenticeship as a means of training for a trade had fallen. Henry Carey's becoming free two and a quarter years after embarking on a seven years' apprenticeship is as much an insult to the tradition of apprenticeship as it is to that of freedom. The last pipemaker in the C18 to become free because he had served a seven years' apprenticeship to a pipemaker is James Huish F 6 February 1781 on the grounds he had been an apprentice of William Commons F 1756 (Huish's apprenticeship entry has not been found, but Commons died between 1757 and 1768). Thomas Cole, apprenticed 26 March 1764 to Israel Carey, took his freedom on grounds of apprenticeship 1 November 1774.

Apart from James Saunders who became free 13 October 1812 because he had been apprenticed to a "china painter", three pipemakers as noted above, and all from the C19, took their freedom by claiming apprenticeship to a pipemaker. They were Philip Guy A 20 April 1812 to William and Amelia Okely and F 14 August 1838, Henry Walker A 17 December 1824 to William and Elizabeth Thomas and F 20 August 1828, and Thomas George A 13 July 1827 to his grandfather Thomas George and F 11 August 1875. It is noteworthy, however, and more evidence is noted in the following section, that the new C19 pipemakers, though they owed little to their C18 predecessors, did make some initial effort to follow traditional procedures. Apprenticeship as a necessary prerequisite for entering a trade was dead, however, though entries did continue to appear in the apprentice rolls, certain firms such as Hill the shipbuilders being apparently very strong on the idea of having their apprentices registered in the traditional manner.

A breakdown of the home areas of the 347 pipemaker apprentices recorded is given in the introduction of the section below on home trade, but a breakdown by father's occupation can conveniently be given here, as it affords an indication of the classes from which pipemaker apprentices came.[15] This breakdown gives only a generalized picture, for it does not take into account the fact that 69% of the fathers worked in Bristol and obviously tended to have different trades from those who lived in predominantly rural areas. For example, 44 fathers were involved in agriculture in one form or another - 22 were yeoman - but few of these were in Bristol, while of the 26 fathers involved in maritime business a majority did come from Bristol, the second port in the country for most of the period in question. The breakdown by trades is as follows (where brothers are known to have been apprenticed the father is recorded twice; the occupations within each grouping are arranged in descending order of frequency and the most common in each has the exact number recorded after it):

CLOTH INDUSTRY	(weaver 24, tailor, woolcomber, clothworker, milliner, clothmaker, shearman, worsted-comber, feltmaker, fuller, dyer, mercer, bodice-maker, merchant tailor)	59
TOBACCO-PIPE MAKING INDUSTRY		46
AGRICULTURE	(yeoman 22, farmer, husbandman, gardener)	43

LEATHER INDUSTRY	(cordwainer and shoemaker 19, glover, whittawer, skinner, currier, spanish-leather dresser, tanner, translator*)	34
BUILDING INDUSTRY	(carpenter including house-carpenter 10, sawyer, mason, tiler including tiler and plasterer, brickmaker, joiner, timberman, stonecutter, glazier)	34
MARITIME INDUSTRY	(sailor-seaman-mariner 19, shipwright, lighterman, boatman)	26
METALWORKING INDUSTRY	(smith and blacksmith including one combining smithing and tobacco-pipe making 9, wireworker and wiredrawer, hooper, farrier, goldsmith, coppersmith, gunsmith, pinmaker, brazier, tinplatemaker)	22
VICTUALLING TRADE	(baker including a gingerbread maker 6, brewer, innkeeper and innholder, butcher, cook, miller, saltmaker, victualler, grocer**)	16
LABOURER		12
TRANSPORT	(porter 7, carrier, hallier)	10
TOBACCO INDUSTRY	(tobacco-roller 5, tobacconist, tobacco cutter)	8
COAL INDUSTRY	(collier and coalminer 6, coaldriver)	7
OTHER TRADES	cooper 8, glassmaker 2, surgeon 2, ropemaker 2, cork-cutter 1, brushmaker 1, perukemaker 1, wheelwright 1, turner 1, scrivener 1, exciseman 1, merchant 1, gentleman 1	
	TOTAL	23
OCCUPATION NOT STATED		6
PAUPER INFANT		1
		347

These figures probably give a fair idea of the sorts of crafts in the same general economic and social class as pipemaking, as well as indicating the major trades in the South-West. Nor surprisingly, the pipemaking industry itself supplied a fair proportion - 13% - of its apprentices, and 41 of the 46 recorded were sons of Bristol pipemakers. Of these no fewer than 18 were taken during the period 1671-85, the time when the "second generation" was reaching apprenticeship age after the founding of the guild in 1652. Of the five sons of non-Bristol pipemakers three came from Somerset about this same period, two in 1670 and one in 1692; one came from

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*"Translator" in the C17 can mean either someone who carried material or someone who changes or alters items, especially one who mends old shoes (so OED). Willis and Merson (eds) 1968: passim take it to mean the latter and make it synonymous with "cobbler".

**Assuming "grocer" to mean a trader in spices, dried fruits, sugar, etc. rather than simply a wholesale dealer or merchant.

Hereford in 1714, which was the time of greatest prosperity for the Bristol pipe industry (see below, sections on trade); and one, rather surprisingly, from London in 1740, a time when the Bristol pipe-industry was beginning to decline and its pipemakers beginning to go to London in search of work (see section below on poll-book evidence).

The largest single industrial group supplying pipemaker apprentices, however, was that of the cloth industry, with 59 individuals or 17%. This indicates the cloth industry, founded in medieval times, was still of major importance in Bristol and the surrounding areas, and the listing of 24 weavers and 14 tailors suggests this was the sort of social class into which pipemakers fitted - that of small, independent, and seldom rich craftsmen working with a few assistants, a poorer-class artisan. It is probably significant, for example, that though coalmining was also an important industry in the surrounding areas of Gloucestershire and Somerset only 6 miners had sons apprenticed to pipemakers: one suspects miners belonged to a social class with which the humble but respectable pipemaker had little contact. Similarly, there can have been no shortage of labourers in the region but only 12 labourers' children were apprenticed to pipemakers, again suggesting labourers belong to a class below that of pipemakers.

Other industries which contributed an appreciable number of apprentices - the leather-using and building trades, each contributing 10% - would fall into the same broad category as the cloth industry: crafts of the independent artisan at the poorer end of the social scale. The relatively large number of apprentices from a farming background - 43, or 12%, including 22 whose fathers were yeoman and 10 who were farmers - calls perhaps for a different explanation, but most of these came from country areas and probably reflect the attraction of the metropolis as opposed to the limited opportunities on the land for younger children in a numerous family and the desire to obtain the relative security of a trade for these children.

As would be expected, the number of occupations which could be classified as upper social class of professional are minimal in the extreme. The single "gentleman" listed - the father of William Jones apprenticed 28 April 1668 to one of the William Evanses - was dead by the time his son was apprenticed and had lived in the wilds of Brecknockshire; in all probability the father had been a yeoman farmer rather than a gentleman in the aristocratic sense of the term. The mercantile crafts have only four representatives: a mercer from Monmouthshire, Morgan Jones whose son Walter was apprenticed 14 January 1628/9 to Samuel and Margaret Morris; a Bristol merchant tailor Thomas Hiscox (deceased) whose son Thomas was apprenticed 11 May 1687 to John and Cicily Tucker; a grocer, Walter Lloyd, from Monmouthshire whose son Isaac was apprenticed 13 March 1693/4 to Edmond and Christian Sinderling; and a merchant, Samuel Wilkins, from Bristol whose son Ebenezer was apprenticed 23 October 1723 to John and Mary Purnell. Only two of these were Bristolians, a clear indication of the rarity with which these crafts crossed social paths with those of pipemakers (neither Hiscox nor Wilkins is listed in McGrath (ed) 1955, 1968 ed or Minchinton (ed) 1957).

The single occurrence of a goldsmith's son - John Wall, Bristol's first pipemaker apprentice, apprenticed to Richard and Anne Berryman 26 November

1619 - is interesting. John Wall's father Thomas is presumably the Thomas Wall, goldsmith, noted in Latimer (1900: 12-13) in 1597 and 1598 as making the Bristol copper farthings, coins which were being produced from 1578 to 1604. The Corporation in 1598 had to ask Wall to buy back over 32,000 of these tokens because over-production by the Corporation had resulted in a market crash, and Wall had to be paid £33 16 6 (equivalent to about three years' profits to the city) for this. This suggests Wall may have been quite well-to-do (how long he was producing these farthings is not stated), but Willis and Merson (1968: xxxv-xxxvi and xxxvi n.1) caution against assuming goldsmiths of this period being wealthy, noting that it was only in the C17 that the trade of goldsmith was changing from a handicraft to a mercantile craft. They instance the only Southampton goldsmith mentioned in the early C17 as a comparatively humble man whose tax assessments do not suggest wealth, and compare him with another in the later C17 who became mayor of the city. Another craft Willis and Merton note as changing character during the century was that of surgeon, which was changing from a manual craft to a profession: two surgeons are noted among the parents of Bristol pipemaker apprentices, one from Gloucestershire whose son was apprenticed in 1675 and another from Bristol who was dead by 1706 when his son was apprenticed. Scrivener and exciseman - there are single examples of each as the father of a Bristol pipemaker apprentice - could be regarded as professions, but neither is likely to have been of much social standing (neither is listed among the trades to which youths in Southampton were apprenticed).

An example, however, of the sort of information on social status not available from a casual examination of family occupation, nor even expected after more detailed evidence is available, is that fortuitously provided by research on his family's history by Brig. G.A. Viner of Sussex (in litt. 8 and 28 August 1974). Brig. Viner is a collateral descendant of George and Anna Viner who made pipes in Bristol over the period 1747-1805 and some of whose products reached North America (see 6: VII(b)(4) below), and his research is worth recounting here to show the sort of modification needed to one's opinions on family status when these opinions are based largely on apprenticeship entries.

The Viners were a south Gloucestershire family, probably in the cloth trade for many generations. The earliest known Viner, John (D ca.1494), married a woman from Bradford-on-Avon, a cloth-manufacturing town, and by the first half of the C17 Richard Viner of Stroud is a clothier and a Trustee of Stroud Parish Charity. The next two generations are also clothiers, Richard's son Robert living at Stroud and Pitchcombe (at which latter he was a Churchwarden) and Robert's son George living at Pitchcombe (where he too was a Churchwarden) and Painswick. From George descends Brig. Viner; from George's younger brother John descends George Viner the Bristol pipemaker. John was apprenticed as a joiner to his uncle by marriage, John Blatchley of Bristol, and after the latter's death to another Bristol joiner; his son, also John, was also a joiner in Bristol, and he is the father of pipemaker George Viner.

Although George's father and grandfather are both joiners "of Bristol", George was baptised (and therefore almost certainly born) at Painswick, suggesting the Bristol branch of the family kept in contact with its south

Gloucestershire cousins (who George's mother was is unknown; she may have been from south Gloucestershire). George's wife Anna Watkins is a descendant of the Fletcher family one of whom had married Robert Viner, George's great-grandfather; Anna's father was of Stroud and her mother a daughter of George Wick of Wickstreet near Painswick, and her marriage to George took place at Stonehouse. All this again suggests contacts with south Gloucestershire were continued by the Bristol Viners. However, the especially interesting item is that Anna brought her husband Wickstreet House, suggesting she was the heiress (through her mother) of a local gentry family; and on George's death ca.1775 the house reverted to her. On her death in 1810 the house went to their son Edmund Wick Viner (note the incorporation of the maternal grandmother's maiden name), who lived there with his wife and maiden sister until both he and the sister died in 1831. Edmund Wick Viner had no children; his wife died in 1856 and this ended, so far as is known, that branch of the Viner family.

The point here, however, is that though George Viner might have deduced as a modestly prosperous pipemaker from other evidence - he exported to North America - one would never have guessed his wife was an heiress; and though Anna Viner continued her deceased husband's business throughout the darkest days of Bristol's pipemaking industry in the last quarter of the C18, when only a handful of Bristol pipemakers survived, and might therefore be considered to be at least a successful businesswoman (her pipes too are known from North America), one would never have suspected that a woman who appears to have remained in the pipemaking business - an arduous trade, especially in Bristol at this time, as is attested by her contemporary, John Frederick Bryant jr, a Bristol pipemaker turned poet who published his memoirs in 1787 (Bryant 1787: vii-xxxiii) - until she was 74 (she is last recorded in business in 1805; she died five years later) owned a country seat where, moreover, her son and daughter were apparently able to live as gentlepeople of leisure until their deaths in 1831.

One point which may be noted briefly in Chalkley's contention (discussed in 2: IX) that among the crafts whose techniques were associated with that of pipemaking were glass-making and pewtering. As indicated when discussing this point, Chalkley is wrong here as he is on nearly every other assertion he makes, and the occupations of Bristol pipemaker apprentices' fathers certainly offer no corroboration to Chalkley's allegation, no pewterers being noted and only two glassmakers. (This last point is perhaps a little surprising when one considers that Bristol had an important glass-making industry - one might have expected, purely on a random basis, more glassmakers' sons.)

Some comparison between the background of Bristol pipemaker apprentices and apprentices of Bristol merchants can be made, for McGrath (1955: 276-7, 1968 ed) has noted the fathers' occupations in the 538 cases where this has been listed for those apprenticed for the periods 1600-30 and 1670-90.

As would be expected, the merchant trade itself supplied a considerable number, 127 or 24%, almost double the proportion of pipemakers' sons who followed their fathers' footsteps. However, as with the pipemaking trade, the largest single group supplying apprentices was not that of the trade itself. In the case of pipemaking it was the cloth industry with 17%, but in the case of merchant apprentices it was families describing themselves as gentlemen (including armiger) which supplied the largest single number, 138 or 26%. Comparing this to the single gentleman - and a deceased provincial one at that - listed among the fathers of pipemaker apprentices one sees at once the vast social gulf between the two trades. Yeoman was given as the occupation of 53 fathers of merchant apprentices, or 10%, and husbandman contributed a further 29, or 5%: the total here, 15%, is surprisingly close to the 12% (which also included farmers and three gardeners, occupations not recorded for fathers of merchant apprentices) for pipemaker apprentices, but the answer here must undoubtedly lie in the term yeoman covering a broad range of the landed farming class - the lack of the occupation farmer among the parents of merchant apprentices would agree with this, farmers being of a lower social class than yeoman, while gentleman ranked above yeoman.

The cloth industry, as befits its position in the regional economy, contributes a share to those aspiring to become merchants - 67 sons of those involved in various aspects of the trade, or 12% - but other industries which had contributed significantly to the pipemaking craft, such as leather and building, are conspicuously low on the list of occupations of merchant apprentices' fathers. Only 11, or 2%, of the former were noted, and only 7, or 1%, of the latter, a social commentary which is not surprising. Of the definitely lower-class occupations, only one labourer's son and one coalminer's son are recorded in the two periods covered as being apprenticed to merchants.

As noted in 2: VII, Chalkley alleged that until ca.1745 English pipes were made from a clay mix to which ground-up fired pipeclay was added and that as breathing the dust from this ground-up clay produced lung diseases apprentices were often orphans and foundlings. Chalkley alleged his contentions were borne out by the Bristol apprenticeship rolls showing orphans and foundlings being apprenticed to pipemakers. Chalkley, as has been observed more than once before, can be proved inaccurate on almost every point he makes, and as indicated in 2: VII there is no evidence to confirm his assertion that ground-up fired pipeclay was added to the mix nor indeed that it was used extensively at all in any part of the English pipemaking process. It is therefore not surprising to find that Chalkley's claim to be supported in his findings by the Bristol apprentice rolls also turns out to be unfounded.

Without an elaborate study of apprentices registered for trades other than pipemaking it is difficult to say what proportion of youths without a parent could be considered normal to whatever period was being studied, and in any case while the apprentice roll entries indicate whether the father was alive or dead they rarely mention the mother so there is usually no means of telling whether the apprentice had lost both parents or only one. Further, even had he lost both, an apprentice might be adequately provided for by friends or relatives - the instances noted above where "friends" were to provide clothing for the apprentice during his term probably indicate either that both parents were dead or that they or a surviving parent were in circumstances where they were unable to provide for their children. Considering life expectancy in the C17 and C18 in general it would be very surprising if orphaned children did not appear regularly in the apprentice rolls; in fact 102 of the 347 pipemaker apprentices listed, or 29%, are recorded as having lost their father by the time they were apprenticed, but this is probably not an unduly high proportion for the time and the generally artisan or labouring classes involved. There are few instances of entries which would imply severely impoverished children. The payments made from the early C18 to masters on taking apprentices to pipemakers for as already noted such payments were becoming standard in the C18 and were restricted neither to pipemaker apprentices nor to Bristol.

The only specific evidence for the apprenticing of poor children to pipemakers comes with a group of entries rather curiously all dated to about the same time. In all cases apprenticeship is made with the consent of either the Overseers of the Poor or the Guardians of the Parish or of both, and in all cases save one (where the apprentice is referred to as a pauper child) the father is referred to as being dead. Seven such youths are apprenticed pipemakers over a period of 35 months and they represent almost a third - 7 out of 23 - of the total apprenticed pipemakers of that period. John Masey, the pauper child, is the only such noted in the entire list of Bristol pipemaker apprentices and is presumably a foundling - in every other case the name of the father is given. The seven are as follows:

Ambrose Flower, A 23 November 1688 for seven years to Isaac and Sarah Hale;
Benjamin Cole, A 9 April 1689 for seven years to Thomas and Anne Hickes;
Thomas Addison, A 6 May 1789 for eight years (with 5s payment for the last year) to James and Anne Abbott;
Edward Watts, A 4 September 1689 for seven years to Jane Randall;
Henry West, A 23 September 1689 for seven years to Anne Smith;
Richard Huett, A 4 May 1691 for seven years to Richard and Anne Nunney;
John Masey, A 31 October 1691 for seven years to John Hollisteed and his wife.

The significance of this concentration of poor apprentices is unknown, but it is a feature restricted to this period, and it does not occur again.

Henry Walker, apprenticed 17 December 1824 to William and Elizabeth Thomas, is described as the "son of Thomas Palmer late of Bristol labourer", an entry which suggests he was illegitimate. There are several superficially similar entries in the C17 apprentice rolls, but they are invariably of Welshmen whose surnames are the same as their fathers' christian names, and this probably reflects the tradition formerly common in Wales that a son took his father's first name as his surname. Examples of this are John Williams apprenticed 27 March 1624 to Samuel and Elizabeth Lewis, who is described as the son of William Davye late of Caerleon; John Griffon or Griffen apprentice to James and Jane Fox 2 March 1668/9 and described as the son of Griffen George of Pembrokeshire; and Paul Thomas apprenticed 26 June 1680 to William and Mary Evans and noted as the son of Thomas Rosser also from Caerleon.

(Reference has been made from time to time in this section and elsewhere in this chapter to the recent study of the Southampton apprenticeship records by Willis and Merson. This has an interesting and most detailed analysis of features and trends of apprenticeship there, and while some of it is not directly germane to the study of a specialized group within the apprentice records of another city, such as Bristol pipemaker apprentices, it provides a useful study for background reading as well as some parallels or divergences worth noting in this examination. See also Patterson 1966: 23-25, 35-36.)

SECTION IV:
TRENDS IN PIPEMAKING FREEDOM AS SEEN IN THE BURGESS-ROLL ENTRIES, 1640-1877

Freedom was traditionally the right granted craftsmen by a corporation allowing them to practice their trade within the area of jurisdiction of the corporation. As has been noted in Section II above, the effectiveness of freedom as a means of regulating city trades was declining throughout the C17, particularly in the second half, all over England and by the end of the century its control was largely lost, many craftsmen practicing their trade and ignoring attempts to compel them to take their freedom. Freedom, however, was a standard, and very frequently the only, means of becoming eligible to vote at parliamentary elections: this was the case in Bristol and it remained so after the Reform Act of 1832 when burgesses (that is, freemen) and freeholders were joined - in boroughs - by all male householders paying £10 or more per year in rent (Latimer 1887: 2, 185). The register of electors for Bristol in 1832 following the Reform Act contained 5,301 burgesses, 862 freeholders, and 4,215 householders (Latimer 1893: 185), the addition of the last-named increasing the total voting population by almost 70 per cent.

It was not until the Reform Act of 1867 that in the boroughs householders who paid poor rates and lodgers who paid £10 or more in rent were enfranchised, an enlargement which in effect gave artisans and shopkeepers the vote for the first time. Freedom therefore retained in Bristol a practical value well into the C19, long after it had ceased to have any other tangible importance. (According to Latimer (1893: 28-30) the early Bristol charters and in particular that of Edward III intended the city government to be a corporation elected by the burgesses but later grants from the crown had enabled the corporation to acquire "the right of self-election and become wholly irresponsible." By the C17, therefore, obtaining one's freedom was of no significance to local elections, there being no such elections.)

Examination of the Bristol burgess books reveals that from before 1700 round-ups of eligible persons who had not taken their freedom were made before elections. The zeal with which potential freemen were sought out probably varied for a number of reasons, one certainly being whether there was a contested election, but it became progressively more noticeable during the C18; it was not restricted to Bristol either, but occurred in other places where freedom was a prerequisite for voting (noted in Willis and Merson (eds) 1968: xvi n.2). The October 1812 general election in Bristol witnessed some particularly spectacular scenes of vote-buying by candidates hunting for potential freemen, and these are vividly described by Latimer (1887: 51-3). When in a normal year at this time the average number of freedoms taken averaged no more than 50 a year, two of the four candidates paid between them ca.£2,500 to put 1,100 freemen on the burgess rolls (one of them had spent over £15,000 to win the seat at the by-election four months previously) and a third candidate entered 600 freemen. Among these freemen were 75 who had obtained the qualification by marrying the widows of deceased freemen, many of which marriages were said to have been terminated at the church doors on leaving. Thirteen pipemakers took their freedom during the period 1-13 October 1812, six of them by virtue of marrying daughters of non-pipemaker freemen and one by marriage to a widow of a non-pipemaker freeman. A further two claimed their freedom on the grounds they were sons of non-pipemaker freemen. Two became freemen because they were sons of pipemaker freemen and one because he had married the daughter of a pipemaker freeman. None claimed freedom by apprenticeship to a pipemaker, though one did so on the grounds he had been apprenticed to a "china painter". These figures clearly indicate the state to which the meaning of freedom had degenerated.

However, this is to anticipate the discussion, for in fact a progressive disintegration of the meaning of freedom is discernible over the two centuries and more that pipemakers took their freedom. In a sense the change is summed up in contrasting the first pipemaker burgess, William Lewis F 1640, and the last, William James F 1877, for whereas the former took his freedom by apprenticeship the latter did so by patrimony from a father who had been a tiler and plasterer, a trade not remotely connected with pipemaking.

One method of determining the change in meaning of freedom is in fact to examine the grounds on which candidates claimed their freedom. As discussed earlier, the normal method was to have served an apprenticeship but patrimony (being the son of a burgess) or marriage to the widow or daughter of a burgess were accepted, the latter with certain conditions. In special cases freedom could be conferred by the Council, as was done when the pipemakers' guild was founded.

From the 1660s, by which time the guild was on a sound footing and the trade flourishing, until the 1730s the overwhelming majority of pipemakers becoming freemen claimed on the orthodox grounds of having been apprenticed to a pipemaker. There is a small but steady stream, tending to increase as time goes on, of pipemakers taking their freedom by virtue of their father being a freeman pipemaker, and a very thin scattering of individuals claiming freedom through marriage to a pipemaker's daughter, or through patrimony but with a non-pipemaker freeman father, or through marriage to the daughter of a non-pipemaker freeman (plus one case, in 1662, of the council freedom). In all, out of 206 pipemaker burgesses recorded between 1661 and 1740, 164 or ca.80% served an apprenticeship. Twenty-nine, or 14%, claimed their freedom on the grounds that their father was a pipemaker and another six - 3% - had married a pipemaker's daughter.

It is thus clear that for the first 90 years of organized pipemaking in Bristol the trade was closely organized round the traditional concept of apprenticeship, with pipemakers' sons, who regardless of whether they were apprenticed must have received a practical training from their father, making up most of the rest of the pipemaking community. Of the six who married pipemakers' daughters three may have taken over their father-in-law's business, for no other family successor is noted. Robert Browning, F 19 October 1669, married Sarah daughter of Edward Battle;

Richard Abbots, F 20 February 1689/90 married Mary daughter of Richard Nunney; and Robert Ducy, F 27 July 1727 married Richard Abbots's daughter Susannah. In Nunney's case he did have a son Robert apprenticed to him and his wife Anne 29 January 1676/7 for seven years but he never took his freedom and probably died during his apprenticeship. The three others married into businesses where their brother-in-law or brothers-in-law would normally have inherited the father's business, but this does not of course prevent partnership. George Powell F 31 January 1704/5 married the daughter of John Lewis, Elizabeth, whose brother Francis became free in 1691 and who continued until at least 1722 and whose mother Susannah had taken over her dead husband's business by 1696 and was still active in 1707. Thomas Thomas, F 24 October 1739, married Susannah daughter of Henry Edwards and brother of Jonas Edwards sr free 1722, which latter had three sons all become pipemaker burgesses in 1747. Thomas Waddam appears to have been actually apprenticed 20 March 1732/3 to John and Esther Wickham but took his freedom 14 November 1739 - in time for the election at that time and eight months before his apprenticeship would have ended - by having married Mary daughter of John Poyte II (F 1707) and sister of John Poyte III F 1739. Neither Powell nor Thomas nor Waddam are recorded taking apprentices, but Powell was noted as a pipemaker in the 1722 and 1734 polls, and Waddam at those of 1739 and 1754 and it is probable they became journeymen in their in-laws' or someone else's businesses. Browning and Abbots did take apprentices indicating they were certainly active, and Ducy, perhaps anticipating the decline which was about to set in on the Bristol pipe industry immediately set up business at the hamlet of Tellisford in Somerset ca.6-1/2 miles SSW of Bath where he took an apprentice in 1729 and had a long-lived business, being noted as a country voter in the 1734, 1739, and 1754 Bristol polls.

However, even during this period there are signs of a loosening of the organization. In the second half of the C17 pipemakers generally, though not always, apprenticed their sons to the fathers, so that the sons took their freedom by apprenticeship and not by patrimony. With one late exception the last pipemaker's son to become a burgess in this manner, however, was Abraham Williams 19 March 1708/9, who had been apprenticed to his mother Susannah widow of Roger Williams F 1668 on 14 January 1701/2. From the beginning of the C18 until 1740, when there is a puzzling change to pipemakers' sons being once more apprenticed but not to their fathers (discussed below), pipemakers' sons, though doubtless still being trained in the business by their father, took their freedom by patrimony. (The exception referred to above is Anthony Baily jr, who was apprenticed 14 December 1743 to his father Anthony sr and his wife Hester.) The increasing number of pipemakers becoming burgesses by patrimony noted above no doubt reflects this, for example 6 out of 22 pipemaker-burgesses in the decade 1711-20 and 9 out of 40 in the decade 1721-30, but it should be noted that the decades from 1681 to 1740 saw the largest number of pipemakers taking their freedom in any case and that from ca.1680 onwards sons of the founding generation of pipemakers would be reaching the age for taking their freedom. From the 1740s, however, sharp changes appear in the pattern of freedom-taking. In the first place, the number of pipemakers taking their freedom, which had averaged 30 a decade between 1681 and 1740 and been as high as 40 in 1721-30, drops suddenly to an average of 15 for the decades 1741-90, there being for example 35 free in 1731-40 and only 14 free in 1741-50. Secondly, the pattern of claims for freedom changes, and apprenticeship as a reason declines much more sharply than even the overall drop in burgesses. For example, 26 of the 35 pipemaker burgesses recorded for 1731-40 took their freedom by apprenticeship while only 6 of the 14 recorded for 1741-50 did so for this reason.

The change is best seen when comparing groups of those taking their freedom immediately before an election. Of the 19 pipemakers taking their freedom between 1 October and 15 November 1739, 13 did so by apprenticeship, the remainder being equally divided among those claiming through a pipemaker father, those who had married the daughter of a pipemaker, and those whose father was a burgess in another trade. By the time of the next election, in 1747, the breakdown of the nine pipemakers free between 23 and 29 June was very different: only one took his freedom by apprenticeship while six did so by citing a pipemaker father, one by marriage to a pipemaker's daughter and one through a non-pipemaker freeman father. Curiously, each group included people who had been apprenticed to a pipemaker but had chosen to claim their freedom through other means. Thomas Wadham F 1739 through marriage to Mary daughter of John Poyte II (see above) appears to have been the same Thomas Wadham A 20 March 1732/3 to John and Esther Wickham for seven years; and Jethro Phillips, A 16 September 1732 to John and Anne Pearce for seven years and turned over to William and Mary Nicholas 14 July 1734 for the remainder of his term, was certainly the Jethro Phillips who took his freedom in 1739 through his father being a freeman tailor. Samuel Richards I, A 2 April 1740 to Rebecca Arthurs for seven years, was certainly the same Samuel Richards who took his freedom in 1747 on the grounds his father was a pipemaker Richard Richards; while John Edwards I, A 8 September 1740 to William and Susannah Pearce for seven years, was the John Edwards who became free two-and-a-half months before his apprenticeship was due to finish in order to be eligible for the 1747 election because his father had been pipemaker Jonas Edwards I. John Bateman, A 22 February 1734/5 to William and Susannah Nayler for seven years is presumably the John Bateman I free 1747 by virtue of having married Elizabeth a daughter of pipemaker John Fryer; and John Newton I A 5 March 1732/3 to John Squibb (no wife mentioned) for seven years was the John Newton who became free in 1747 through his father being a freeman weaver. Wadham appears in the 1739 and 1754 polls as a pipemaker, Phillips in the 1739 polls and Bateman and Newton in the 1754 polls, while the Richards family continued to make pipes into the C19; but nothing more is known of Edwards, who did not even note in 1747 though his becoming free at this time was clearly for that purpose[16] - in reality all with the possible exception of Richards may have failed or abandoned their apprenticeships. In any event their appearance as pipemakers indicate guild organization was failing, and the manner in which and the reason for which they obtained their freedom are other examples of the disrepute into which freedom was falling.

The 1747 figures may be extreme, for the figures for the 1754 election indicate five taking their freedom through apprenticeship and five for other reasons, and those for the 1756 by-election show all five who took their freedom did so by virtue of apprenticeship. However, of the seven who took their freedom for the 1768 election only two did so by apprenticeship whereas three did so because their fathers were pipemakers, one because he had married the daughter of a pipemaker, and one because his father had been a non-pipemaker freeman - a sergemaker - and this sets the pattern for the rest of the elections up to the 1832 Reform Act. Of the 15 pipemakers who became free for the 1774 election only 5 did so on grounds of apprenticeship; for the 1780 election, none out of the five; for the by-election of 1781, one out of five; and for the 1784 election, none out of eight. In fact, with the exception of three who took their freedom in the C19 by apprenticeship and who will be discussed later, James Huish F 6 February 1781 and still alive 1812, who must have been apprenticed to William Commons sometime between 1756 (when Commons became free) and 1768 (when Commons was noted as deceased), was the last pipemaker to become a burgess by apprenticeship.

There is one curious exception to this trend to claiming freedom by means other than apprenticeship. As noted earlier, pipemakers' sons from the beginning of the C18 were no longer being apprenticed to their fathers but were taking their freedom by patrimony, though no doubt their fathers were still training them in the craft. From 1740, however, there is a steady trickle of apprentices - 7 out of a total of 44 recorded from 1740 until the end of the century - who are sons of pipemakers and who are apprenticed, not to their fathers, but to other pipemakers. There is even one case of a pipemaker's son being apprenticed to his father during this time - Anthony Baily jr, A 14 December 1743. The seven apprentices are: Samuel Richards I, son of Richard Richards and apprenticed to Rebecca Arthurs 2 April 1740; John Edwards I apprenticed to William I and Susannah Pearce 8 September 1740; John Phillips, son of Maurice Phillips and A 13 April 1741 to John and Hester Wickham; Robert Carter, son of James Carter and A 20 August 1757 to John and Susannah Lee; Peter Quarman jr, son of Peter Quarman sr and A 23 November 1763 to George and Elizabeth Ebbery; Henry Wickham, son of Josias Wickham and A to the Lees 7 January 1765; and John Lewis II, son of Isaac Lewis and A 13 December 1783 to John Carey.

These seven are a mixed bag. Richards and Edwards, as already noted, took their freedom in 1747 by patrimony, while Phillips was discharged 29 November 1744. Only the fathers of Edwards and Phillips are specifically noted as being dead when their sons were apprenticed, though several of the others could have been and in two cases the fathers were alive but apparently working in London. In one case, that of Quarman, the father is not recorded in the freedom rolls - the latter must have been the Peter Quarman A 2 March 1732/3 for seven years to John Squibb and turned over to William and Mary Foord 22 May 1739 and about whom nothing more is known unless he was the Peter Quarman F 1747 by patrimony as founder. The last reference to Richard Richards is in the 1739 poll-book, and the last reference to James Carter is in the 1754 poll-book. In the cases of Wickham and Lewis their fathers were certainly alive when the sons were apprenticed but the 1781 poll-book records Isaac Lewis being in London and sometime between 1754 and 1774 Josias Wickham also went to London, for the poll-books record him in Bristol in the former year and London (where he is also recorded in the 1784 poll-book) in the latter.

However, none of these seven need have been apprenticed to obtain their freedom, and a possible explanation for this apparent return to more honest methods may be that these people were genuinely interested in becoming working pipemakers and did not have their fathers' businesses available to them to train in - they may have been journeymen's sons. As indicated elsewhere (Sections III above, VI and VII(b)(4) below), there appears to have been a retrenching of the industry within well-established concerns after ca.1740 and these seven cases (and Anthony Baily jr who was apprenticed to his father) may reflect this. The increasing use of journeymen in such firms, for which there is evidence, would reduce the numbers of apprentices taken, but it would still be as important, perhaps more important, to train members of the family to be practicing pipemakers.

A breakdown by decade of the various methods of obtaining freedom yields an interesting observation on the decline of the Bristol pipe industry (a complete breakdown by decade from 1631 to 1880 is given below). After 1740 apprenticeship as a means of becoming a pipemaker was dying, as both the above figures and the preceding section dealing with the apprentice rolls indicate, and the trade apparently retrenched itself in family business: between 1741 and 1790 of the 76 pipemaker burgesses the largest single number - 30, or 39% - took their freedom by claiming a pipemaker father, and a further 11, or 14% by having married a pipemaker's daughter, while 27, or 36%, became free through apprenticeship. The overall percentage of those becoming free for orthodox reasons - 89% - is therefore not far off the 97% for the period 1661-1740, but patrimony and marriage now account for 53% as compared to 17%.

The following is a breakdown by decade and method of taking freedom:

Decade	A	B	C	D	E	F	G	H	Total
1631-40	1	-	-	-	-	-	-	-	1
1641-50	2	-	-	-	-	-	-	2	4
1651-60	6	-	3	-	-	2	-	8	19
1661-70	13	1	1	1	-	-	-	1	17
1671-80	9	1	-	-	-	-	-	-	10
1681-90	23	2	-	1	-	-	-	-	26
1691-1700	29	3	-	-	-	-	-	-	32
1701-10	18	4	-	1	-	1	-	-	24
1711-20	16	6	-	-	-	-	-	-	22
1721-30	30	9	-	1	-	-	-	-	40
1731-40	26	3	2	2	-	2	-	-	35
1741-50	6	6	1	1	-	-	-	-	14
1751-60	10	2	1	3	-	-	-	-	16
1761-70	5	3	1	3	-	-	-	-	12
1771-80	5	14	1	1	-	1	-	1	23
1781-90	1	5	1	3	-	2	-	-	12
1791-1800	-	-	-	-	-	-	-	-	0
1801-10	-	2	1	-	-	4	-	-	7
1811-20	-	2	2	1	-	6	2	-	14*
1821-30	-	2	1	-	-	6	-	-	9
1831-40	2	4	3	-	-	-	-	-	9
1841-50	-	-	-	-	-	-	-	-	0
1851-60	-	-	-	-	-	-	-	-	0

1861-70	-	-	-	-	-	-	-	-	0
1871-80	1	-	1	-	-	-	-	-	2
	203	69	19	18	0	24	2	12	348*

A - apprenticed to a pipemaker
B - son of a pipemaker freeman
C - son of a non-pipemaker freeman
D - married daughter of a pipemaker freeman
E - married widow of a pipemaker freeman
F - married daughter of a non-pipemaker freeman
G - married widow of a non-pipemaker freeman
H - special case

* Totals include one person who took his freedom as a pipemaker on the grounds he was apprenticed to a "china painter".

No pipemakers took their freedom during the decade 1791-1800, nor indeed for the 20 years between 1784 and 1804, and when pipemaker-burgesses again appear they belong largely to a new generation reestablishing the industry. Of the first 7 pipemakers to become free in the C19 - covering the period 1804-09 - 4 did so by citing marriage to the daughter of a non-pipemaker freeman and one by citing a non-pipemaker freeman father. The remaining 2 were sons of pipemakers. Out of the 41 appearing between 1804 and 1877 (39 of them between 1804 and 1839), only 3 - 2 in the 1830s and one in the 1870s - become free by apprenticeship to a pipemaker. Ten take their freedom through a pipemaker father and one by having a wife a pipemaker's daughter, but 16 do so because they married the daughter of a non-pipemaker freeman, 8 because their father was a non-pipemaker freeman, 2 because they married the widow of a non-pipemaker freeman, and one because he had been apprenticed to a non-pipemaker freeman. In other words, 35% of those pipemakers becoming burgesses during this period did so by apprenticeship to a pipemaker or through family connections while 65% used quite extraneous reasons obviously purely as a legal convenience.

It is interesting to note, however, that some of this new tradition of pipemakers falls in with the cycle observed after the first founding of the industry in the C17. By the 1830s the second generation is appearing with four pipemakers - Thomas Appleford F 1830, Samuel Roberts, Thomas Roberts, and Edward Thomas all F 1838 - claiming their freedom because their fathers had been pipemakers, though in each case the father had claimed his freedom on poor professional grounds. Similarly, one of the three pipemakers becoming free through apprenticeship - Henry Walker F 1838 - had been apprenticed in 1824 to William Thomas who had become free 1807 through marriage to a millwright's daughter, suggesting that the new pipemakers attempted, however fitfully, to re-establish known traditions (the other pipemakers to become free in the C19 were Philip Guy F 1838 who had been apprenticed in 1812 to William Okely F 1809 whose pipemaking antecedents go back into the first half of the C18, and Thomas George apprenticed 1827 to his grandfather Thomas George and F 1875, the pipemaking antecedents of whose family went back to a similar date).

By the early C19, however, freedom even as a means of becoming enfranchised apparently held little interest for most Bristol pipemakers.

Nearly all those appearing in Matthews's 1810 directory were burgesses, but by 1820 only a minority of those listed had their freedom, and as the refounded industry expanded into the 1850s in its new ghetto beyond Lawford's Gate its workers no longer bothered to claim their freedom on even the most artificial grounds.

FIG 143 illustrates in bar-graph form the number of Bristol pipemakers taking their freedom each year during the period 1640-1877. The first point to note is that while the number of new burgesses varied considerably from year to year before ca.1740 there were few years without at least one pipemaker taking his freedom, whereas after that date there was an increasing tendency for pipemakers to take their freedom at irregular but well-spaced intervals. Traditionally, freedom was considered the culmination of one's training in whatever trade one had chosen, a graduation in effect; this change ca.1740 suggests that by the middle of the C18 this aspect of freedom-taking was largely dead. Put another way, it suggests freedom as a prerequisite for plying one's trade was no longer necessary. True, Rogers as noted earlier suggested this was becoming the case from the 1680s, but Latimer indicates the Council was fighting the tendency as late as the 1730s and 1740s and even into the 1770s. Obviously, however, the Council must have largely given up the fight before freedom became so much of an election plaything, so it would appear that it was the 1730s rather than the end of the C17 which saw the civic authorities finally abandon systematic attempts to force freedom on all craftsmen working in the city.

The graph also plots the number of pipemakers becoming free against general and by-election years, but interpretation of apparent correlations turns out to be dangerous, because the only definite indication of pipemakers deliberately taking their freedom for an election is the appearance of groups of closely-dated entries occurring immediately before an election. For example, the peak indicated on the chart for 1660 is not connected with the election of that year, for the election took place in April and none of the five pipemakers taking their freedom that year did so before May. (The peak indicated in 1669, which was not an election year, similarly turns out to be six pipemakers becoming free on various dates between January and December; and the peak of 1707, involving eight pipemakers, has the same explanation.)

The first time there is evidence of pipemakers deliberately becoming free for an election occurs in 1680/1, when all seven pipemakers who became free during the year 1 January 1680/1 to 31 December 1681 did so on 5, 7, and 8 February, the Bristol election ending 7 March.[17] This, however, is virtually an isolated case among the C17 pipemakers, for the peak coinciding with the 1685 election and the less well-defined one in 1690 turn out to be random. Of the five pipemakers free in 1685 one took his freedom on 31 March (the day after the Bristol election, at which the nominees were returned unopposed in any case, ended) while the others did so in a group on 10, 11, 12, and 14 December - the reason for this close spacing is unknown, but it certainly could not have been connected with the election of eight months previously. Similarly, whatever the reason for nine pipemakers taking their freedom between 9 March 1699/1700 and 12 April 1700 it can hardly have been the following election, for that was not until sometime in the period 2 January-5 February (Latimer omits mention of this election; the period during which it must have run comes from the Interim Report....). These concentrations may represent efforts by the Council to enforce the law that all tradesmen working within the city had to be free - as indicated above in Section II(d) there were a number of these attempts at the end of the C17 and beginning of the C18, Latimer noting (1893: 116-7) that an unusual number of people applied for freedom in 1717 following one of these hunts by the Council.

However, the 1715 election, held in September, shows clear suggestions that eligible individuals who had omitted to take their freedom were coerced or bribed to do so specifically for their vote. Nine of the 14 pipemakers to become free that year did so between 6 and 17 August and in addition there was one each on 20 and 21 July who may well have taken their freedom for the same reason. Of the remainder one did so in June, the other two after the election. Latimer does not specifically record freedom-buying for votes but there were considerable irregularities in the election and polling was stopped after two days because of continuous damage and bloodshed (Latimer 1893: 102).

The 1722 election, by contrast, appears not to have provided a crop of new burgesses, for although the chart shows a peak of eight pipemakers for the year the election took place 28 March-3 April and only three pipemakers took their freedom before that time - two in March, one in February. The defeated candidate did claim that many people were brought to the polls who had no right to vote but apparently did not produce proof of his contention (Latimer 1893: 130-1).

By the 1727 election there can be no doubt that eligible persons were being sought out and made free in order to vote. Of the 15 pipemaker freemen of that year 13 were enrolled between 17 and 31 July, the Bristol voting being in early September. Among accusations and counter-accusations at the election was that of one defeated candidate that "the treachery of the common people occasioned by the uncommon bribes given and offered by the opposite party" had lost him votes (quoted in Latimer 1893: 163); perhaps the two successful Whig candidates included freedom-buying among their "uncommon bribes".

The 1739 by-election was occasioned by the death of one of the Bristol members on 30 September, and between 1 October and 15 November, in which latter month voting started and ran until 12 December, all 19 pipemakers free that year became burgesses. In a vote in which ca.94% of the electorate took part the Tory candidate Edward Southwell who, it was recorded on 27 November, had

> kept open house at Shirehampton ever since he has declared.
> There are constantly employed a baker, a butcher, and two
> brewers to provide for the reception of all comers and goers

won with 2,651 votes, 448 more than his rival (quoted in Latimer 1893: 224-5). The high percentage of voters, doubtless occasioned by the open-house campaign, is reflected in the high number of pipemakers being made free - the highest number, indeed, in any year during the 237 years pipemakers are recorded taking their freedom. Conceivably the products of the baker, butcher, and two brewers had a special appeal to the pipemakers who voted, for 43 of them did so for Southwell and only 18 for his opponent

Henry Combe!

The precedent of vote-buying by making eligible persons burgesses now appears to have been clearly established. The 1747 election was held in June and had initially three candidates for the two seats, but one retired "alleging that a contest would excite animosity among the citizens" and the other two were thus returned (Latimer 1893: 267). Nine of the ten pipemaker burgesses that year took their freedom during the period 23-29 June, presumably because at that time the contest was still on.

The voting during the 1754 election was held in the fortnight ending 1 May, and all ten pipemakers who became free that year did so between 25 March and 8 April. Latimer records (1893: 310; 310-11) that no fewer than 986 persons became burgesses in April, their fees being paid by one or another of the three candidates, and that the two successful candidates and their supporters probably spent ca.£20,000 each in their campaigns. Among the voters "captured" were Francis Payton who had been apprenticed for seven years as early as 1717 but had presumably escaped notice until this election, and John White who had been apprenticed for seven years in 1733 but had also presumably avoided taking his freedom until this campaign. With such zeal being shown in vote-gathering it is not surprising that only ca.110 resident electors did not vote. That the well of potential voters had not been emptied, however, is suggested by the by-election of March 1756, two years later, for six pipemakers became burgesses between 18 and 24 February. Freedom-buying for votes is not recorded by Latimer during this campaign, but only 50 votes separated the two candidates and it can hardly be doubted that this method of obtaining votes was by now a standard and energetically-persued means.

By contrast, the local political leaders decided to avoid a contest during the 1761 general election and each party nominated a candidate who was then formally elected (Latimer 1893: 344), a process which no doubt explains why no pipemaker took his freedom that year. Again a by-election occurred in 1766 when one of the members had to vacate his seat on becoming First Lord of Trade, but he was re-elected in the December election without opposition. Thus again there was no concentration of pipemakers taking their freedom, only one pipemaker burgess being recorded and he in June (and, incidentally, the first for ten years).

At the general election of March 1768 there were initially three candidates, but one withdrew on the eve of the nomination day and so the other two were returned unopposed. However, as was recorded at that time, "Many houses were opened in the several parishes for the general entertainment of the friends of all parties" while a contest seemed likely, (quoted in Latimer 1893: 383-4); no doubt the six pipemakers who became free 9 March and the one who did so on 24 February represent voters bought while a contest was anticipated.

The 1774 election, described by Latimer (1893: 409) as "the most interesting election that ever took place in Bristol", saw the American Henry Cruger, an advocate of conciliatory policies towards the American colonies, poll the most votes among four candidates. The polls were open for 23 days ending 2 November and not only were nearly 2,100 new freemen placed on the burgess rolls by the committees of the rival candidates but over 400 freemen were brought from London, and two came from Ireland, one from Guernsey, and one listed as from "Charlestown, South Carolina" to sway the results (Latimer 1893: 410-11). Fifteen of these nearly 2,100 new freemen were pipemakers, the dates of their enrollment running from 3 October to a last-minute one on 2 November (James Lansdown, who claimed through having a non-pipemaker freeman father, though he had been apprenticed pipemaker 4 May 1742 - 32 years before - to Nicholas and Charity Willis, without presumably finishing his apprenticeship) though, oddly, he did not vote.

The September general election in 1780 and the January-February by-election the following year each produced five new pipemaker burgesses, and Latimer's descriptions (1893: 444-6 and 446-7) indicate the usual high-spirited and totally corrupt affairs. The production of five new pipemaker burgesses in the second election so soon after the first suggests a goodly number of pipemakers were no longer bothering to take their freedom unless it was made worth their while; it may also testify to the zeal of the political factions in ferreting out new eligible individuals. The anti-Cruger campaign of George Daubeny in 1781, inviting "all true Britons" to a dinner at the Full Moon inn, Stoke's Croft, "to try the difference between American bull beef and the roast beef of Old England" and "drink a health to the Friend of the King and the Constitution [Daubeny]" was met by Crugerite claims that without Cruger freemen "should have had no beef nor ale" and exorting voters with the slogan "A large loaf, a full pot, and Cruger for ever," and indicates the general tenor of the 1781 campaign, which Cruger lost. An opponent of Cruger writing in a Tory journal unconsciously indicated how voters could be intimidated by their masters, alleging that in winning the 1744 election Cruger ruined so many "labouring freemen" by persuading them to vote against their master's wishes, for which they were "ruined", that he had moved from Bristol to Weston near Bath to avoid the appeals of the unfortunate voters (Latimer 1893: 447).

The 1784 election was, according to Latimer (1893: 456), the longest and closest ever contested in Bristol. Polling ran from 3 April to 8 May, and the highlight was a neck-and-neck struggle between Cruger (who ultimately won) and Daubeny for one of the two seats. Scouts looking for potential freemen must have done their job with their usual efficiency, for seven pipemakers became burgesses during the time the polls were open.

For the 1790 election the two parties agreed, as they had done in 1761, to avoid the expense of a campaign by each nominating a candidate, and though two other candidates did appear the voting on the first day the polls were open was so emphatic that the competition ceased, the two nominees winning their seats. This gentleman's agreement between the two parties to divide the two Bristol seats between them appears to have continued for over 20 years, for not until the June by-election in 1812 and the general election in October that year - the American presidential nomination campaign-like qualities of which latter have already been described - was there any serious election campaign (Latimer 1887: 29-30, 50). The four general and two by-elections between 1790 and June 1812 yielded either no serious opposition to the nominees of the two parties or else no opposition at all.

No doubt this contributes to the lack of pipemakers taking their freedom between May 1784 and September 1804, for there would have been no campaigns to round up those eligible to take their freedom and vote, but trade directory evidence indicates pipemaking was at an all-time low in Bristol during this period. Further, when pipemakers do begin to appear again in the burgess rolls - one in 1804, one in 1806, one in 1807, two in 1808, and two in 1809 - they do not appear in connection with elections and can therefore be interpreted as new pipemakers representing the industry reviving and taking their freedom as it suits them. The fact that four of these burgesses took their freedom because they had married the daughter of a non-pipemaking freeman and another because he was the son of a non-pipemaking freeman further reinforces the impression that this was a new start being made to the industry; only two of the new burgesses represented the old industry, becoming free through their fathers being pipemakers.

There were, curiously, no pipemakers who took their freedom for the June 1812 by-election, but 13 did so for the October general election and they have been discussed earlier. Their appearance indicates the pipemaking industry was once more a going concern, for this number had not become free at one time since 1774 when 15 took their freedom.

The 1818 election was also contested, but Latimer does not mention freedom-buying and only one pipemaker appears to have taken his freedom for it, the election taking place 17-20 June and John Parker becoming free 12 June on the grounds he had married the widow of a non-pipemaker freeman. (The only other person to take his freedom for this reason is Jonathan Dark who became free 12 October 1812, though he had to pay a fine of £2 in addition to the standard 3s4d fee; Dark is referred to both in the burgess book and the 1812, 1818, and 1820 polls as a pipeburner and not as a pipemaker, which suggests he may have simply fired other people's pipes - or conceivably collected used pipes to clean them by firing - and not made them himself.)

The 1820 general election was contested but again Latimer makes no reference to freedom-buying and no pipemakers took their freedom that year. At the 1826 general election there was a major contest and 999 freemen were added to the burgess rolls at this time (Latimer 1887: 116-7), but rather strangely in view of the increasing size of the pipemaking industry evidence from trade directories, not a single one of these was a pipemaker. However, at the 1830 election, voting for which ended in Bristol on 5 August, the rival parties expended "not short of £30,000" and put more than 1,500 freemen on the burgess books (Latimer 1887: 138, 142-3); and among these were nine pipemakers, all of whom took their freedom between 26 July and 3 August. Two of them, Richard Moon and Thomas Appleford, became free because they had pipemaker fathers, and with the exception of one who claimed through his father being a non-pipemaker freeman the remainder claimed by marriage to the daughter of a non-pipemaker freeman.

The significance of the group of seven pipemakers who took their freedom in August 1838 - one on the 13th, four on the 14th, and on the 20th, and one on the 30th - is unknown. No election took place that year, nor does Latimer indicate any event which could be connected with this occurrence; only three of them, Samuel Roberts, Thomas Roberts, and Edward Thomas, used their freedom to subsequently vote (all three at the 1841 and 1852 elections). Similarly, no explanation is forthcoming for there being two pipemakers taking their freedom on 30 July 1839 (one, Simon Moon, did vote in 1841).

When these latter two, Simon Moon and John Packer, claimed their freedom they marked the effective end of a tradition stretching back to the Middle Ages. In a sense they symbolized the old and the new, for while Packer claimed his freedom because his father had been a freeman butcher Moon claimed his freedom through his father James F 1808 who had claimed it through his father Charles F 1770, an apprentice of William Nicholas F 1730 apprentice of James Jenkins F 1707 apprentice of William Tippet sr F 1689/90 apprentice and son of J(o)ane Tippet widow of Robert Tippet I, the founder of the most famous Bristol pipemaking dynasty F 1660 (and, rather ironically, the first pipemaker to become free by virtue of marriage to the daughter of a non-pipemaker freeman). When the last two Bristol pipemaker burgesses took their freedom in the 1870s not only was freedom an anachronism - for the second Reform Act of 1867 had removed the last vestiges of the usefulness of freedom for election purposes - but Bristol pipemaking itself was largely dead, the industry having dramatically collapsed in the 1860s. Thomas George II, who took his freedom through apprenticeship 11 August 1875 and died in 1881 aged 68, was a member of the last Bristol pipemaking firm. Of William James, who took his freedom 18 July 1877, we know nothing except he claimed his freedom because his father had been a freeman tiler and plasterer, for his name does not appear in the trade directories of this period: presumably, therefore, he worked as a journeyman for one of the handful of makers who struggled through the crash in the 1860s. Why George and James took their freedom we do not know, but perhaps they were romantics at heart and not unaware of the long history of their trade.

A comparison was made between the apprenticeship period as stated in the apprentice rolls and the time which elapsed before freedom was in fact taken to see whether the progressive lessening in importance of freedom observable from other evidence appeared here, but the results were inconclusive. It had seemed possible that as taking one's freedom became less important the period between commencement of apprenticeship and becoming free would tend to increase because more and more people were becoming burgesses only when forced to by drives to make all traders within the city freemen or later when election candidates made it worth their while, but no clear-cut progression appeared. From the beginning - that is, from the mid-C17 - there appears to have been considerable latitude in how promptly after apprenticeship freedom was taken. This may partly have been due to the rule which was noted earlier in discussing guild organization that a candidate had to be 24 years old before becoming free - so that, for example, a 16-year old apprentice serving a seven-year apprenticeship would finish the latter when he was 23 but still have to wait a year before becoming a burgess - but in many cases this is demonstrably not the case and its seems certain the most usual reason was simply the decline in effective guild control or concern in the matter.

Excluding the case of Thomas George II, which occurred in the C19 when freedom was no longer a meaningful institution, the pipemaker with the dubious distinction of delaying the longest before taking his freedom is Francis Payton, who was apprenticed 20 November 1717 for seven years and who did not take his freedom until 4 April 1754 during the election campaign of that year, a delay of over 29 years. (George was apprenticed 13 July 1827 for seven years, and did not take his freedom until 11 August 1875, a delay of over 41 years.) Three much earlier instances of very long delays are the cases of Thomas Smith jr apprenticed for seven years and one covenant year 2 November 1672 and not free until 18 September 1704, a delay of almost 24 years (assuming his covenant year had to be served before freedom could be granted); Joseph Butt apprenticed for seven years 27 August 1670 and free 8 April 1704, giving a delay of over 26 years; and William Davis apprenticed for seven years 31 October 1683 but not free until 10 August 1713, a delay of almost 23 years. Nothing further is recorded about Butt, though Smith is recorded as a pipemaker in the 1715 polls and Davis at the 1722 and 1734 polls. Much earlier than these three was the case of John Beale, who was apprenticed for seven years 20 August 1660 and did not become a burgess until 5 February 1680/1, a delay of over 13 years. A number of other examples of delays of ten or more years could be instanced fairly randomly throughout the period pipemakers were being apprenticed. In fairness to these and similar individuals it should be noted there is no proof they spent all the interval making pipes in Bristol undetected; they could have been elsewhere much of the time. (There is one possible case of a Bristol pipemaker producing pipes though apparently never taking his freedom there. Wills's Museum in Bristol has an unprovenanced pipe of typically earlier-C18 Bristol form with the name T/MOR/GAN in the standard Bristol-style cartouche on the bowl side (see illustration in Appendix IX). The only Bristol T. Morgan known is the Thomas Morgan A 1726/7 to Charles and Margaret Buckler and transferred on his master's death to John and Rebecca Macey (prob. John Macey II) in 1729. There is no evidence that this Thomas Morgan ever finished his apprenticeship, but there is certainly no other Bristol pipemaker to whom this typically Bristol bowl of about Thomas Morgan's period can be attributed.)

A consistent feature of these people is that they did not take apprentices, at least in Bristol. As already noted when discussing the Bristol guild it was stipulated that journeymen as well as masters had to be burgesses, but one suspects that as freedom became less important and the Council ceased its periodic hunts for unfree craftsmen, journeymen tended not to bother with freedom unless forced or persuaded to, while masters probably did incline to taking their freedom as long as apprentices were being taken. As noted above, the taking of apprentices became progressively less frequent as the industry retrenched in family businesses after ca.1740. That masters were latterly using quite a number of journeymen in their businesses is suggested by John Frederick Bryant's father, John Frederick sr, employing ten journeypeople before the decline of the Bristol pipetrade with the Stamp Act troubles (Bryant 1787: vii-viii) - no mention is made of the father having any apprentices, and indeed the apprentice rolls make no mention of his taking apprentices.

At the other end of the scale there are quite a number of individuals who took their freedom very promptly - within the first month or so after they became eligible. There are even two, or possibly four, cases of people taking their freedom before the nominal date. Samuel Fishpell apprenticed 13 November 1682 to Llewellin and Mary Evans for eight years took his freedom 13 November 1682, over five months before the eight years were up;

while Richard Carter apprenticed 17 June 1699 to James and Jane Abbott became a burgess 4 June 1706, 13 days before the seven years were up. Of the two uncertain cases one is that of Nathaniel Chilton apprenticed 26 February 1695/6 to John and Mary Sinderling for seven years plus six months covenant. Chilton became free 24 May 1703, three months after his seven years were up but three months before his covenant period was due to finish; however on 7 November 1699 he had been transferred to Joseph and Jane Stanford as Sinderling was dead and the entry then says he was turned over for seven years - whether this indicates the removal of the covenant period is uncertain, for it might also be taken to mean he was to be with Stanford for seven years (that is, from 1699). The other uncertain case is that of Llewellin Evans F 31 May 1661 when his master was noted as being James Fox: if he is the otherwise unidentified Llewellin Williams Bevan apprenticed to James and Jane Fox 9 October 1654 he became free over five months before his apprenticeship was due to finish (no Llewellin Evans is noted in the apprentice rolls).

Edward Reed F 29 June 1700, Richard Gill F 19 June 1725, John Harris II F 12 May 1729, and George Viner F 22 April 1747 all took their freedom the day after they became eligible; William Evans I F 26 September 1660 and Henry Artus F 25 February 1681/2 took theirs two days after they became eligible; and William Cullen F 4 July 1707 and Charles Moon F 10 January 1770 took theirs three days after. Others who did so within 30 days were James Bull sr F 13 November 1665 (assuming his covenant year had to be served before he could become free), William Evans II F 6 August 1667, William Taylor F 18 February 1688/9, Devereaux Jones sr F 3 July 1691, Charles Jones F 13 October 1694, John Pearce I F 13 November 1696, Thomas Lewis II F 1703, John Beaton F 12 May 1707, James Jenkins F 7 August 1707, Francis Painter F 12 September 1715, Mathew Gethling F 16 June 1722, and John Peters F 19 February 1756; several others from the 1710s to the 1730s did so within 60 days. The majority of those taking their freedom after apprenticeship did so in a period of from under one year to about four years after completing their apprenticeship, and this is fairly constant from the middle of the C17, when the guild was formed, into the second half of the C18, by which time apprenticeship in pipemaking had declined.

Latterly there is no doubt that those taking their freedom promptly were doing so because the end of their apprenticeship happened to occur near an election, which does indicate a degeneration of the original concept of freedom, but it must be remembered that even those who took their freedom promptly in the heyday of the industry formed only a small percentage of the 347 pipemaking apprentices recorded; and the spread of such cases covers the period from the beginning of the industry on an organized basis until the 1730s when on other evidence it can be seen the old bonds of the trade were beginning to weaken.

However, there is one aspect of freedom-taking latterly which does reflect the disintegration of the traditional system, and it is connected with the increasing buying of freedom for potential burgesses to procure their vote at elections. Mention has already been made of Jethro Phillips, Thomas Wadham, Samuel Richards I, John Edwards I, and John Newton I who took their freedom - Phillips and Wadham for the 1739 election, Richards, Edwards, and Newton for that in 1747 - on grounds other than apprenticeship although each had originally been apprenticed to a pipemaker. There are several other instances of this in the following 70 years - Henry Carey F 9 March 1768, Henry Wickham F 10 September 1774, James Lansdown F 2 November 1774 (mentioned earlier), William Showell F 19 April 1784, and John Adams F 1 October 1812. Further, while Adams did not become free until over 20 years after his seven-year apprenticeship had begun and Lansdown not until over 32 years after his had begun, Carey had started an apprenticeship only 26 months previously (Edwards had been apprenticed seven years less ten weeks before becoming free, Wadham seven years less four months).

How active these individuals were as pipemakers is uncertain. It has already been suggested that of the earlier group possibly only Richards continued a business, and none of the later individuals took apprentices and only one is recorded in the trade directories of the period. Carey did not vote at the 1768 election - perhaps the manner in which he obtained his freedom was too much even for that hectic campaign, and he may have been very young at the time - but he is recorded as a pipemaker at the 1774, 1781, and 1784 elections. Lansdown did not vote in 1774, but did so in 1781 and 1784, by which later date he was in Southwark, which was a London pipemaking area.

Showell's case is extraordinary. There is no doubt the William Showell A 16 November 1776 to William Carey for seven years is the same William Showell F 19 April 1784 by virtue of his father being a freeman cordwainer and voting immediately afterwards from London. (Curiously, his sister Hester married James Carrington F 1781 fl 1784 who became free on the grounds he had married the daughter of a freeman cordwainer.) The problem is a William Showell appears as a pipemaker at 12 Houlton St, beyond Lawford's Gate, in Sketchley's directory for 1775, a year before the date for Showell's apprenticeship. There is no evidence suggesting two William Showells, pipemakers, and as Houlton St was outside the city Showell could probably have worked there without taking his freedom, particularly by this time of the C18.

Conceivably, with the collapse of the Bristol pipe-industry with the outbreak of the American Revolution in 1775 (see Sections VI and VII(b) below), Showell found his business gone and was lucky enough to find employment with one of the few makers who were still struggling on in Bristol and glad to accept a position as low as that of an apprentice (which would have been easier for Carey to keep than a paid journeyman - in fact Carey got £2 from Alderman Kitchen's fund when he took Showell apprentice). William Carey does not appear after 1775 and probably his business too went under, leaving Showell free of his indenture. Subsequently Showell went to London for he votes from there in 1784, immediately after having taken his Bristol freedom. Possibly the zealous searchers for potential freemen and voters did not confine themselves to Bristol alone but collected information on, and sought out, eligible Bristolians elsewhere in England.

Of Adams (A 1792, F 1812) we know nothing; he did not even vote in 1812.

The most that can be said, therefore, about these individuals excluding Showell is that they may have been journeymen pipemakers with those makers whose names do occur in the directories, or in the case of those who migrated to London they may have worked there as journeymen pipemakers. The near-closure of the Bristol pipe industry towards the end of the C18, however, and the general poverty of the industry elsewhere at this time, suggests many pipemakers recorded in the burgess books and polls of the period did little work as pipemakers.

Between the 1770s and 1827 (at which latter date pipemaker-apprenticeship entries cease) only five pipemaking businesses in Bristol are taking apprentices: Israel Carey F 1756 and his son John F 1780; Samuel Richards 11 (presumably Samuel jr F 1774 when he was living at Woolwich though he was back in Bristol by 1781) and probably son Samuel III F 1812; John Okely F 1768 and after his death his widow Martha and son William F 1809; William Thomas F 1807; and Thomas George (William Okely's brother-in-law) F 1812. Over that period they took only 12 apprentices among them, and at these masters only William Thomas belonged to the new, post-American Revolution group of pipemakers.

SECTION V:
TRENDS IN PIPEMAKING AS SEEN IN THE POLL-BOOKS, 1715-1852

Until the secret ballot was introduced in 1872, voters and the way they voted were recorded and published in poll-books. These thoroughly undemocratic proceedings have left us invaluable lists of inhabitants, in many cases with their trades noted.

The earliest Bristol poll-book is that for 1715, which apparently survives only as a typescript copy in the Guildhall Library, London (its existence does not appear to be known to Bristol historians - Ralph and Williams (1968: xxiv) note, correctly, that the 1722 poll book was the first published, but they do not mention the existence of this earlier, unpublished, list of voters). The right to vote in Bristol prior to 1832 was restricted to freeholders and freemen; in the Bristol poll-books those who voted were listed by parish, and freemen (except in the 1847 book) had their trade entered. An idea can therefore be obtained of which trades concentrated in which areas of the city. From the 1812 election onwards the street of residence of the voter is given, permitting a much more exact distribution of trades to be noted. The 1715 book as it survives does not record how votes were cast, but the remainder up to 1852 [18] do: considering the general corruptness of politics particularly in the C18 (see remarks in Section IV above) it would be unrealistic to relate votes to the political creeds of the candidates, but it is perhaps worth noting briefly what observations can be made on how pipemakers did vote.

The poll books, however, are not always easy to use. There are frequent mis-spellings and occasional mis-ascriptions of occupation, parish, and even of vote. The books may have been taken from lists compiled during voting when the voter gave his name to a recorder - an error such as that of Daniel Chilton for Nathaniel Chilton (1722 polls) makes no sense as a copyist's mistake, but could easily have been a mishearing of the name if shouted amid the usual din of a public election. A much more frustrating problem with the poll books is that there are different editions for the same election, and not every edition has exactly the same voters listed (I am grateful to Mrs M. Tatchell for checking various books held at the British Museum, Guildhall, and Society of Genealogists libraries in London against lists from books held in Bristol). Indeed, Oswald (1960a: *passim*) has four pipemakers - Israel Carey, Alexander Cherrington, William Haynes, and John Macey - cited as appearing in the 1722 Bristol poll book which this writer has so far been unable to locate in the various copies.[19] The 1722 polls appear to have been particularly confused, probably for reasons discussed below. Examples of some problems encountered are the poll books for 1754 held in the Bristol Archives Office and the British Museum listing Samuel Pearce a pipemaker in Christchurch and Philip Knell a pipemaker in St Peter while the poll books for the same year at the Guildhall and Society of Genealogists libraries list the Christchurch Samuel Pearce as a scrivener and puts pipemaker Samuel Pearce in St James and Philip Knell in Temple.[20]

Nevertheless, the poll lists do offer an opportunity for random checks on the accuracy of the burgess rolls, for while obviously not every freeman voted at each election, those who did and gave their trade as pipemaker should appear in the burgess rolls as obtaining their freedom if the burgess rolls are comprehensive, provided always that the poll lists have not been heavily salted. In fact, excluding the Israel Carey, Alexander Cherrington, and William Haynes listed by Oswald in 1722 (see above), only 12 pipemakers not found among the 198 in the burgess books for the C18 appear, confirming the impression from other evidence that the Bristol burgess records are reasonably comprehensive and accurate.

Those noted in the poll books known to this writer but not in the burgess rolls are as follows: Charles London 1715; John Davis, Samuel Helmes, Nicholas Mortimore sr, Nicholas Mortimore jr, and Thomas Murry all 1722; Henry Haynes, Richard Slade, Walter Hardwick, and John Penny all 1734; Thomas Burt 1739; and James Newman 1754. It is conceivable these 12 were pipemakers free from some other city but working in Bristol and allowed to vote there; one would have thought, however, the permission (and probably fine) for them to do so would still have been recorded in the burgess rolls. The fact that these individuals appear most frequently in the 1720s and 1730s, when the Bristol pipe-industry is at its height, adds some weight to the suggestion they could have been attracted to Bristol from some other centres; however, as noted below, both the 1722 and 1734 elections brought accusations of wholesale fraud and this is probably a more likely explanation for the appearance of these names. The status of these people as Bristol pipemakers remains uncertain, therefore.

Two instances of non-freemen voters also occur in the early C19, Philip Thomas voting in 1818 and William Roberts in 1830, the latter from Cardiff. (A number of other names not recorded as pipemaker-freemen do appear in the poll books: John Downs [sic] and George Gay 1841; James George I and James Maun 1841 and 1852; William Perrett, James Roberts, John Roberts, John Williams IV, James Winchester, and Thomas Young II 1852; but by this time the franchise was no longer restricted to burgesses and all had probably qualified as householders paying £10 or more in rent.[21] Presumably Downs is the Down of Sa[u]nders and Down, a pipemaking partnership noted 1839-49;[22] James George I (B ca.1787, D 1873) is the son of Thomas George I F 1812.) As noted in the preceding section, Latimer does not mention vote-buying in the 1818 election, though it is difficult to believe it did not occur; but in 1830 some £30,000 was expended in vote-gathering efforts and more than 1,500 freemen were placed on the rolls, so the smuggling in of an unfranchised voter from out of town and probably voting by proxy would not have been difficult (Roberts voted for Davis and Baillie, the two successful candidates, as did the large majority of pipemaker voters).

According to Latimer (1893: 130-1), the defeated candidate in 1722, William Hart, accused Sir Abraham Elton, who had beaten him out of second place by 126 votes, of bribery, threats, and bringing in many people not entitled to vote. Hart apparently did not produce any evidence of his contention, however, perhaps because if the five pipemaker-voters in 1722 listed above were indeed not entitled to vote Hart himself was not guiltless of buying voters, for though the two Mortimores, Helmes, and Davis all voted for Elton and the other successful candidate Joseph Earle, Murry voted for

Hart. (Until the Redistribution Act of 1885 Bristol returned two Members representing the whole city - except at by-elections, therefore, voters were allowed two votes and the two candidates gaining the most votes were declared the winners.) In addition, as noted below, Hart may have had a pipemaker vote twice for him at this election.

After the 1734 election the mayor and corporation of Bristol petitioned parliament to unseat Thomas Coster in favour of John Scrope, who had been beaten out of second place by 205 votes, on the grounds the former had polled invalid votes. According to Latimer (1893: 188-9) a copy of the poll-book for the election in the British Museum has manuscript notes suggesting about one-sixth of the votes polled were bad, and gives Scrope a majority of 66 votes. However, the city must have felt their case was poor, for after considerable financial outlay and after a large part of a Commons sitting had been spent debating the petition, they withdrew it. Certainly the four pipemakers noted above voting in 1734 and possibly not valid voters voted for Coster. (Attempts to find the poll-book referred to by Latimer as being in the British Museum were unsuccessful.)

In view of the prevailing corruption in the electoral system it would be surprising if some evidence for votes being cast twice or of dead pipemakers listed as voters were not found. There are three possible cases of the latter. Charles Chick, F 1697, is noted as being dead by 13 March 1721/2 when his son Samuel took his freedom by patrimony but his name appears among the voters from Temple parish in the 1722 election, the voting for which in Bristol was held from 28 March to 3 April. At the same election, which as noted above appears to have been more than usually irregular, Thomas Lewis sr, F 1703, though noted as being dead by 27 November 1721 when one of his two sons named Thomas was apprenticed to Margaret Cooper, appears among the voters from St James parish. Charles Chick's votes were for Earle and Elton (as were those of Samuel), so perhaps William Hart (above) had some grounds for complaint; however, Lewis voted for Hart, so it appears to have been a case of the pot calling the kettle black. Samuel Pearce sr, F 1754, may also have voted from the grave, for he is referred to as deceased when his son William took his freedom by patrimony on 7 April 1784 and voting in Bristol for the election that year only commenced 3 April, suggesting (unless the freedom-roll entry is inaccurate) that either Samuel Pearce died between 3 and 7 April but voted between 3 April and his death or else his vote was rigged. Samuel sr is recorded when voting as living in London, which would have made checking conveniently difficult; Samuel jr is also recorded voting as from London though William Pearce voted from Bristol.[23] Both Samuel Pearces voted for the same candidates, Brickdale and Daubeny.

Another suggestion that the 1722 election had more than its fair share of irregularities is the appearance (according to Oswald 1960a: 63 - this writer has been unable to locate the entry) in the poll-book for that year of an Alexander Cherrington. He does not appear in the burgess rolls, but may be Alexander Cherrington II A 29 December 1679 as a pipemaker to his father William Cherrington I and on whom there is no further information. Unless his freedom was inadvertantly omitted from the burgess rolls, Cherrington - if it is the same person involved - was voting illegally. (Something similar may have occurred with another member of the Cherrington family at the 1680/1 election, though no voters' list survives for that election. As noted in Section IV above, this election was the first to show evidence of freedom-taking by pipemakers specially to be able to vote. One of those becoming free at this time was John Cherrington son of William Cherrington I, who was apprenticed to his father 14 August 1673 and removed 17 July 1675 by the Mayor and Alderman with the consent of the apprentice and the master, no benefit to be had by the apprentice and his name to be removed from the Tolzey Book. Perhaps the Cherrington tendency for dubious arrangements was inherited from Alexander Cherrington I whose several apprenticeships and doubtfully legal listing as a guild founder-member in 1652 have already been noted in Sections I and II above and who may have been William I's father.)

An entry which may involve double voting also occurs in 1722. The poll book lists a George Avery and a George Every, both voting from St James parish and both voting for Hart. Either of these can be convincingly identified as the George Ebbery F 1721 (date of apprenticeship not found) but no identification can be found for the other, so one would assume either a double recording in the printed list or a double voting. If the latter, it appears to be the only case involving pipemakers.

Another point of usefulness of the poll books is to record pipemakers for whom no records appear after they have taken their freedom. This latter feature becomes progressively more common as the C18 progresses and is probably occasioned by these pipemakers becoming journeymen with other makers and thus never taking apprentices, the apprentice entries, which fall sharply after ca.1740, hitherto having given the bulk of post-freedom references to pipemakers. However, towards the end of the C18, with the near-collapse of the pipemaking industry in 1775 and the years following, a number of the makers appearing in the poll-books may well have been unemployed, or at least not employed as pipemakers.

In the C19 century, however, when most pipemakers are clustered in the St Jude's area just outside the pre-1835 city limits (see Section VIII below), the information becomes particularly useful because addresses are also given, and sometimes speculations can be made as to the employer for whom the journeyman worked. For example, James Edgar F 1812 voted in that year from Narrow Plain in St Philip and Jacob In-parish, near enough St Jude's to suggest he worked there particularly as no businesses are recorded about that date in the in-parish; but in the 1818 and 1820 elections he is recorded on Host St in the city centre, which suggests he may have been working for William Okely at Under the Bank. In the 1830, 1832, 1835, and 1837 elections he is recorded in Gt George St in St Jude's, indicating he had moved to the rapidly-expanding pipemaking quartier.

Similarly, a great deal more information is available on the Moon family than would ever have come from freedom- or apprentice-rolls. Charles Moon, F 1770, votes from St James in 1774, at which time that parish still had virtually half Bristol's pipemakers; in 1781 he had moved to Bedminster - no other pipemaker is recorded there before Richard Offer fl 1859-66 - and by 1784 he was in Castle Precincts, suggesting he may have been working for Isreal II or John Carey; in 1812 he was at Lawrence Hill in St Philip and Jacob Out-parish, some way west of St Jude's; and in 1818 and 1820 he was on Ann [sic] St in St Jude's, indicating he too had ultimately moved into the new pipemaking area. James Moon F 1808, Charles's son, is recorded in business at Pipe Lane, Temple, in the 1833 and 1834 directories: he, interestingly, appears to have moved out of St Jude's to establish himself, for in 1812, 1818, and 1820 he voted from Gt Ann St and was presumably a journeyman to a St Jude's maker, but in 1830 and 1832 he votes from Rose St, Temple, and in 1841 from adjacent Avon St. (Temple Way now occupies the site of Avon St; Rose St still remains, at the "Cherry Tree").

In view of known shortcomings in directory entries, it is possible James Moon had a business in Pipe Lane by 1830, for William Dowdeswell F 1830 voted from that address in that year. One of James Moon's sons, Richard F 1830, also votes in that year from Rose St, suggesting he may have been working with (or at least living with) his father; another son, Simon F 1839, voted in 1841 from Temple Back, suggesting he could have been working for the Ring firm who had their business there.

Thomas Fisher F 1812 voted from Avon St in 1818 and Rose St in 1820 before appearing in the directories at 70 Temple St 1825-32 as Joseph Edwards II's successor, voting from there in 1830. However, Fisher had also voted from Temple St much earlier, in 1812, suggesting he could have been working for Edwards at that time.

John Mills F 1830 occurs in the directories only in 1844 and 1845, when he is listed at 50 New St and has apparently taken over William Pratt's business at that address listed there since 1835. However, in 1830 Mills voted from New St (no number given, unfortunately) and it is possible he was a journeyman for Pratt and took over his business on his death or retirement.

Another example is John Tovy F 1812. In that year he voted from Castle St in Castle Precincts; in 1818 and 1820 he is at Old Market, near St Jude's but still inside the city; and in 1830, 1832, and 1835 he is in St Jude's, at Gt George St.[24] Finally in 1837 he votes from Earl St, a now-vanished lane running off Pennywell Rd a little way NE of St Jude's and then in largely open country (see Section VIII below) and in 1841 was probably at the same location, though the address is Pennywell Rd - perhaps by 1837 he had made enough money to live outside the fast-evolving slum of St Jude's.

Other journeymen moved around, but within the St Jude's area or parts adjacent. John Ballard F 1808 votes in 1812 from Lawrence Hill, some way west of St Jude's, and in 1818 from St George's parish in Gloucestershire, in the same general area; in 1820 he is in the old central pipemaking area of Lewin's Mead, but in 1830, 1832, and 1835 he is in Gt George St and in 1841 on New St in St Jude's: though apparently active for at least 33 years he never appears in a directory. Arthur Roberts F 1812 and a brother-in-law of John Tovey above is on Little George St in 1812, Eugene St in 1820, and Gt George St in 1830, 1832, 1835, and 1837; his only directory appearance is in Pigot's 1842 directory.

A variant form of information obtained is data on makers between the time they took their freedom and their first appearance in trade directories, though as discussed in the following section there is some evidence from non-Matthews's directories that Matthews's series were omitting makers actually in business. Apart from James Moon, John Mills, and Arthur Roberts noted above, there is Thomas Edgar F 1830 and perhaps a brother of James Edgar above, who first appears in directories only in 1847, after which he is listed until 1862 on Gt George St; but he voted from Gt George St in 1832 and 1841 besides 1830, suggesting he had been there in some capacity the entire period.

With the collapse in the 1770s of the city's attempts to prevent non-freemen from practicing trades (Section II(d) above), it becomes only a matter of time before the freedom rolls begin to no longer be an accurate representation of tradesmen working in the city, though the necessity for obtaining freedom before being able to vote ensured the continuance of burgess roll entries. With the extension of the franchise as a result of the First Reform Act of 1832, however, all semblance of the burgess books being a cross-section of Bristol trades ceases, and the poll-books once again supply otherwise unavailable information. With the demise of the apprentice and the freedom rolls as effective sources of information in the early C19, only the poll books and the trade directories (Section VI below) remain as sources.

The latter list owners of businesses rather than individual workers (though many of the Bristol pipemakers must have had in effect "one man" businesses) and one might thus have hoped for the poll books to note otherwise unrecorded journeymen working for these businesses. In the early 1870s, for example, after the bottom had fallen out of the Bristol pipemaking industry in the earlier 1860s and the industry was dying, the firm of Thomas George were still employing about 30 hands (Anonymous 1921a)[25] and even if, as seems likely, George's, along with Ring's, were the biggest Bristol firm and not all 30 employees would have been directly involved with the making of pipes, the score or so other businesses in the 1840s and 1850s must have employed a sizable number of employees among them. Support for this conclusion comes from the census data for this period, which is discussed in detail in the immediately-following section. The 1841, 1851, and 1861 censuses give the total numbers of those of all ages employed in pipemaking as 226, ca.258, and ca.220 respectively. Further, while the 1851 census abstracts do indicate there was at least one pipe-manufacturer in Bristol employing between 30 and 34 people at that date, they also suggest the normal businesses were indeed "one man" or family establishments with about three to five employees in addition to the proprietor.

However, as it turns out, the poll books are of virtually no help in identifying otherwise unrecorded journeymen pipemakers, for only two pipemakers appear in all the C19 poll books who do not also appear either in the freedom rolls or the trade directories, and one of these, William Roberts noted in 1830 and probably related to the numerous and confusing Robertses recorded as pipemakers in Bristol at this period, was working in Cardiff. Otherwise, only Philip Thomas, voting from George St [sic] in St Philip and Jacob in 1818, is unknown from other sources, though there is a family of Thomases pipemakers in Little George St during the first half of the century. Actually, as noted above, Thomas and Roberts appear to have voted illegally, never having become freemen.

Lastly, there is the listing in the books of "out-voters", Bristolians living elsewhere but whose votes were recorded in Bristol. This enables one to see which tradesmen left the city, presumably to look for better employment opportunities, and thus to guess at what trades were declining, or at least were over-stocked with workers, in Bristol. This information provides extremely interesting evidence relating to Bristol pipemaking in the C18, as is discussed below.

Trends in the C18 industry show quite clearly when pipemaker voters are tabulated by area of work and year of election, as below:

	1715	1722	1734	1739	1754	1774	1781	1784
*All Saints	-	1	-	-	-	-	-	-
Bedminster	-	-	-	-	-	-	1	-
Castle Precincts	-	1	-	1	1	1	1	5
*Christchurch	1	-	-	-	2	1	1	-
St Augustine	2	-	-	-	-	1	-	-
*St Ewen	-	-	-	-	-	-	-	-
St James	16	24	23	24	19**	16	8	4
*St John	2	1	1	3	1	4	-	1
*St Leonard	-	1	-	-	-	-	-	-
*St Mary-le-Port	-	-	-	-	-	-	-	-
St Mary Redcliffe	1	5	3	3	3	1	1	-
St Michael	2	7	8	12	7	5	7	5
St Nicholas	1	-	1	-	-	-	-	-
St Peter	2	1	1	1	-	-	-	-
St Philip and Jacob	-	1	1	1	3	1	2	1
							(out-parish)	
St Stephen	-	1	-	-	4	-	-	-
St Thomas	4	2	2	5	-	-	2	1
*St Werburgh	-	-	-	-	-	-	-	-
Temple	2	3	5	8	7	4	4	6
sub-totals	33	48	45	58	47	34	27	23
OUTVOTERS	-	-	1	3	6	11	18	21
totals	33	48	46	61	53	45	45	44

*The seven small parishes forming the core of medieval Bristol.

**Philip Knell, recorded voting from St James in one poll-book for this year and from Temple in another, is included here in St James on the not-too-satisfactory grounds that when previously recorded voting (as far back as 1715) he had been in St James and that St James was the parish by far the most strongly associated with pipemakers at this time, thus making it more likely that Knell worked there.

The first point which should be noted is the trend in the number of pipemakers recorded working in Bristol at the various dates (the "sub-totals" listed above). These figures show an increase up to 1739, when 58 are recorded; thereafter the numbers drop steadily. This agrees with the evidence of the apprentice and burgess rolls, which suggests the Bristol pipe-industry had a sharp reduction in apprentices being taken and qualified craftsmen becoming free ca.1740, and also agrees with the evidence from the Bristol export trade in pipes (Section VII(b)(4) below) which suggests the period ca.1690-1740 was the zenith of that trade.

The second point to note is that the decline in pipemakers recorded in Bristol after 1739 is paralleled by a rise in Bristol pipemakers moving elsewhere to continue their trade. This move has started by 1734 (when

Robert Ducy votes from Norton St Philip ca.6 miles SSE of Bath) and steadily increases so that in 1774, on the eve of the near-total collapse of the Bristol industry following the American Revolution 25% of Bristol pipemakers voting are expatriate. With the severe effects on the industry with the dislocation of its oversea trade the number of pipemakers leaving to seek a living elsewhere continues to increase: 48% were out-voters by 1784.

The third point to note is the distribution of pipemakers within the city. In the C19 as will be noted below and also in Section VI pipemakers concentrated in St Philip and Jacob parish, in fact in a very small area of the out-parish of St Philip and Jacob (that part beyond the city limits until 1835) known after 1849 as St Jude's. In the C18 lack of addresses prevents seeing just how close together pipemakers of that time worked and whether they had a quartier like their successors a century later, but there can be no doubt they concentrated in St James parish, particularly in the earlier part of the century when the industry was at its height. The 1715, 1722, and 1734 polls all list 50% of Bristol's pipemakers in that parish, and up to 1774 a marked concentration still continues in that parish. Not until the 1780s does St Michael rival it as a pipemaking area, and then it is not a case of St Michael gaining pipemakers but St James losing them. St Michael parish is in fact the only other Bristol parish to have an appreciable number of pipemakers, the number increasing steadily in the earlier part of the century until in 1739 ca.20% of the pipemakers recorded in that year were in that parish; ca.40% were recorded in St James for that year. In the second half of the century the number recorded falls sharply, but it stays around half a dozen from 1754 to 1784 while the numbers in St James fall rapidly throughout that period. The only other parishes to record any substantial number of pipemakers in the C18 are St Mary Redcliffe and St Thomas in the earlier part of the century and Temple fairly consistently throughout the period, the last-named recording six in 1784 as opposed to five in St Michael and four in St James.

The concentration in St James agrees with other evidence. Although the parish was very large and in fact extended outside the city boundary of the period and included much open land (FIG 148a) Lewin's Mead was in this parish, and in the 1690s the Robert Tippet family, the William Tippet family, and Robert Nunney, all pipemakers, lived in Lewin's Mead (see Appendix IX); and it appears probable that James Jenkins (fl 1707-39) lived or at least worked there or in the immediate vicinity at any rate during his earlier career, as a number of varieties of pipes predominantly his were found in a deposit of wasters and kiln-debris uncovered in 1971 during construction work in Lewin's Mead (O. Kent 1973: 198; Arch. Rev. 7 (1972) 61 s.v. Bristol - Lewin's Mead), and though Jenkins is recorded voting in 1734 and 1739 from St Michael he voted in 1722 from St James. (In fact, St Michael and St James adjoin and the former actually includes the south end of Lewin's Mead, so that Jenkins could have spent all his working life in Lewin's Mead.) A kiln-tip deposit found in 1973 immediately beneath Whitefriars, a lane off Lewin's Mead, and including pipes identical to those attributed to Israel Carey II and found in 1971 at the angle of Broad Weir and Lower Castle St (R. Price in litt. 18 January 1974), must represent Carey's period at Lewin's Mead, which immediately preceded his stay at Castle Green (adjacent to Broad Weir and Lower Castle St), for he was definitely working at Lewin's Mead by 1775 - and probably earlier, for he voted from St James in 1774 and had become free in 1756 - and voted from St James in 1781 but had moved to Castle Green by March 1782 (Appendix IX; cf also pp571 and n39 and 766-7 below). The pipe kilns at Whitson and Rosemary Sts, which on the evidence of pipe material found there must have been factories of the Robert Tippet enterprises, are also in St James parish. As is noted in Section VI below, Bristol's first trade directory, which appeared in 1775, noted 4 of the 11 pipemakers listed as being in Lewin's Mead. Another of the 11 was listed in nearby Lower Maudlin Lane (now Street), also in St James parish. There is therefore reason to suppose that the concentration of pipemakers in St James parish in fact formed quite a close group near the central area of the town. There is little evidence from which one can locate where pipemakers in St Michael worked, but it could well have been in the area immediately adjacent to Lewin's Mead (cf remarks on James Jenkins above); Anna Viner, also listed in 1775, lived in Horse (now Host) St very close to Lewin's Mead, though only part of Host St was in fact in St Michael parish, the rest being in St Augustine.

The three parishes of St Mary Redcliffe, St Thomas, and Temple are adjacent one to another and among them cover the city area south of the Avon. This area was already industrial, and in particular was connected with Bristol's port trade (cf Buchanan and Cossons 1969: *passim*), and may have been convenient for small industries such as pipemaking. Certainly potteries (Pountney 1920: map between pp358 and 359) and glass-works (Buchanan and Cossons 1969: 146) - were located there. By contrast the seven small parishes which formed the core of medieval Bristol (asterisked in the table above) have few pipemakers, three in fact having none and two more noting only one each in the entire century. Of the remaining two only St John has a fairly consistent scatter, and it is possibly significant that St John is the parish which marches with St James across the Frome. In all, therefore, there seems evidence to suggest Bristol pipemakers in the C18 before the collapse in 1775 concentrated along the Frome from what is now the head of the Floating Harbour to perhaps the Broadmead area.

The expatriate Bristol pipemakers make a particularly interesting study. The first, as already noted, was *Robert Ducy* who voted in 1734 at "Philip's Norton, Somerset" (Norton St Philip, ca.6 miles SSE of Bath) and had a long career in that area, being recorded at Tellisford ca.1-1/2 miles east of Norton St Philip at the 1739 and 1754 elections. In fact, Ducy must have left Bristol immediately or very shortly after obtaining his freedom there, for he is recorded (Oswald 1960a: 67) as taking a T. Tanner apprentice at Tellisford in 1729 - for which he received £4 - and had only become free in 1727, when he married Susannah daughter of pipemaker Richard Abbots (Oswald *loc. cit.* gives Ducy's freedom date wrongly as 1726). However, it is possible that Ducy may have come from this area originally, for the Bath Roman Museum has the heel fragment of a pipe which must date to somewhere in the period ca.1650-90 with the name IO/HN D/VCY: if this Ducy is any relation of Robert he must be ancestral, but because Robert took his freedom by marriage we do not have the information as to where he came from which we would have had if he had been an apprentice with an entry in the apprenticeship rolls. Nothing is known of John Ducy, though one may speculate he worked in the NE Somerset-west Wiltshire area.

By 1739 two other pipemakers, John Harvey and Joseph Milsom, had left Bristol to seek their fortune elsewhere, in both cases in London. Harvey is probably the John Harvey F 1725/6 (the John Harvey voting in St James in 1734 is probably the John Harvey F 1705/6 and voting in St James in 1715, 1722, and 1739); nothing further is known about the London John Harvey. Joseph Milsom was apprenticed 1714 and became free 1722, but nothing else is known about him.

By 1754 five pipemakers beside Ducy have left the city, all going in the time-honoured manner to London. They are John Frederick Bryant sr (F 1747), Joseph Coules (A 1728 F 1737), William Foord (A 1723 F 1733), William Pearce (A 1721 F 1733/4) and John Poyte IV (A 1731/2 F 1739). In this case all five had been active in Bristol prior to going to London, which may suggest they were conscious of decline beginning in the Bristol industry and were anxious to move to better fields. It is dangerous to generalize, however, for two of the five subsequently returned to Bristol, and John Frederick Bryant jr records his father, the John Frederick Bryant sr above, went to London before 1753 because he disliked pipemaking and became a journeyman painter (Bryant 1787: i). His being recorded at the Bristol polls of the following years as a pipemaker therefore does not mean he was an active pipemaker, only that he was a Bristol freeman with that qualification. It thus cannot always be taken for granted that a pipemaker recorded at the polls was an active one, particularly in the bleak last decades of the century. In 1760, however, Bryant sr, "in consequence of proposals made him by a relation in Bristol", returned there to follow his original calling and worked in reasonable prosperity until his business began to decline after the Stamp Act troubles of 1765-66, voting in St James parish in 1774, being listed in Lewin's Mead in that parish in the 1775 trade directory, and dying ca.1777.

Coules voted in St James in 1739 two years after becoming free, but by 1754 had made his way to London, voting from there in the elections of 1774, 1781, and 1784. Foord worked in Bristol for some ten years after becoming free in 1733, voting in St James in 1734 and 1739 and taking several apprentices. He is noted taking an apprentice, Isaac Battin, in 1740/1, but between then and Battin's becoming free in 1748 probably left for London, as when Battin became free it was noted he had changed masters. At any event Foord is in London by 1754, though nothing further is recorded of him. Poyte, free 1739, voted in St James in that year, but by 1754 was in London; nothing further is known about him. Pearce, like the others, was from St James parish, and voted there in 1734 and 1739. He is in London in 1754, but had returned to Bristol by 1774, when he is in St Augustine parish (the William Pearce voting in St John parish in 1784 is probably another maker of that name who became free that year). Pearce cannot have left Bristol until sometime, probably several years, after 1748, for he and his wife Susannah took an apprentice in September that year who duly took his freedom in 1756, suggesting at least some years training were given by Pearce before he left for London.

By 1774 a quarter of the pipemakers listed in the poll book for that year were away from Bristol, and all save one of these 11 were in London or the London area. The exception is Thomas Bickham, who took his freedom in

1754 and voted in Temple parish for that year, but had moved to Bath sometime in the following 20 years, presumably between May 1768 when a son Joseph is apprenticed and Bickman is referred to as a Bristol pipemaker, and 1774. Even he, however, took the trek to London shortly after, for in 1781 and 1784 he is recorded voting from Lambeth. Already in 1774 Samuel Tuckey who had become free in 1754 and voted that year in St James, is voting from Lambeth; in 1781 and 1784 he has crossed to the north side of the Thames. Samuel Richards jr became free in 1774 in which year he voted from Woolwich. He is the pipemaker who gave periodic work to John Frederick Bryant jr the poet until he (Richards) returned to Bristol, "having married a young woman with some considerable expectations" (Bryant 1787: xx, xvii-xviii, xix) - this must have been over the period ca.1774-78. (Bryant tried to rent Richards's business, but the latter's landlord, having been earlier lampooned in verse by Bryant, refused to rent, and Bryant was unable to afford to buy out the business, move it, and erect a new kiln.) Richards returned to pipemaking in Bristol where his father, uncle, and grandfather had been or were pipemakers (though his uncle, Henry, as noted below, was working in London), for the 1781, 1784, and 1812 polls list him in Temple and the trade directories list him, and after him his son Samuel III F 1812, at Thomas St (now St Thomas St) - latterly at least at number 34. That his business weathered the storms at the end of the C18 is suggested by this Samuel and his wife Ann taking an apprentice in 1783 (another apprentice taken 1814 by Samuel and Susannah Richards is more likely to have been taken by Samuel III.)

In London proper Coules was still there in 1774 and with him seven other Bristol pipemakers. These are:

Jonas Edwards [jr]: F 1747, voting in St James 1754, but from London 1774, 1781, and 1784;

Samuel Lewis: F 1774 and votes in that year from London; voting from Lambeth 1781 and Southwark 1784, prob. the Samuel Lewis noted in Southwark 1799-1805 (Oswald 1960a: 80 and Atkinson and Oswald 1969: 211);

Henry Richards: F 1774 and votes in that year from London, also votes from there 1781;

William Russell: A 1757, F 1768; voting from London 1774, 1781, and 1784, poss. the William Russell noted in London 1805 (Oswald 1960a: 91);

Henry Wickham: A 1765, F 1774 and votes in that year from London; votes from Brentford, Middlesex, 1781 and 1784;

Josias Wickman: F 1739; voting in St James 1739 and St Philip and Jacob 1754; voting from London 1774, 1781, and 1784;

William Young jr: F 1774 and votes in that year from London; votes from London 1781 and from Lambeth 1784.

Whether all those listed were actively or even occasionally engaged in pipemaking is, of course, unknown, but it is probably significant that a number of them do appear at addresses in East London, a centre for London pipemaking since the early C17, and that Lambeth and Southwark, also listed, were areas where London pipemakers worked (see 4: VI, also ref. in 5: I).

In 1781, 18 out of 45 makers listed in the poll book of that year are outside Bristol, or 40%. Again the overwhelming majority of those 18 are located in or near London; indeed, only 2 are not. Of these, one, William James (F 1756) appears in the 1774 polls in St James, but by 1781 has removed to "Eaton", Buckinghamshire - presumably Eton of public school fame. The other is James Huish, who became free 1781 and votes in that year from Ashwick, 3-1/2 miles NNE Shepton Mallet, Somerset; but he had returned to Bristol by 1784, for he votes in Temple in that year and in 1812, 1818, and 1820 votes in St James.

In the London area Samuel Lewis is in Lambeth and Henry Wickham at Brentford, and Thomas Bickman has moved from Bath to Lambeth. Thomas Cole (A 1764 F 1774), who voted in 1774 in St James, has moved by 1781 to Deptford; by 1784 he has crossed to the north bank of the Thames and is in East London, where he still is in 1812. In London itself five new Bristolians have appeared. They are:

Isaac Bickman: F 1774; votes in St James that year, but voting from London 1781, 1784, 1812, and 1830;
Joseph Cousens: A 1759, F 1774; votes in St James that year, but voting from London 1781 and 1784;
Samuel Harris: F 1781 and votes in that year from London;
Isaac Lewis: F 1768; voting from London 1781;
William Smith: F 1756; votes in St John 1774, but voting from London 1781.

They join Joseph Coules, Jonas Edwards, Henry Richards, William Russell, Samuel Tuckey, Josias Wickman, and William Young jr already in London.

By 1784 there were almost as many Bristol pipemakers away from the city - 21 - as there were remaining in the city - 23 - and this suggests graphically how calamitous had been the decline of the industry in Bristol following the loss of the North American colonial trade. The drain in makers from St James parish is particularly heavy. It seems likely, indeed, that this period saw the lowest point in the fortunes of the Bristol pipemaking industry, for as has been noted in Section IV above and is noted in Section VI below the industry is reviving from ca.1805. Unfortunately, the lack of contested elections in Bristol between 1784 and 1812 prevents poll-book evidence being available on this point, but certainly by 1812 the pattern has changed for only three expatriate voters, all from London, are noted compared to 21 in Bristol.

In 1784, Isaac Bickman, Thomas Cole, Joseph Coules, Joseph Cousens, Jonas Edwards, William Russell, Samuel Tuckey, and Josias Wickham are in London; Samuel Lewis is in Southwark; Thomas Bickmam and William Young jr are in Lambeth; and Henry Wickham is in Brentford. Eight more Bristolians are in London and one more in Southwark; none are recorded outside the London area, emphasizing again how big a role London has always played for people from the provinces seeking their fortune there. The addresses given for these expatriates are consistently in the poorest areas - some of the actual streets are noted ca.75 years later in Beames's survey of London slums (Beames 1850: passim, 1852 ed) - and these areas are known from other evidence (e.g. Bloice in Atkinson and Oswald 1969: passim) to be areas where London pipemakers worked. However, again one must be careful to note that not all those Bristol expatriates recorded need have been working as pipemakers. John Frederick Bryant jr the poet returned to London, as we know from his own account, sometime before 1787 to set up as a stationer, bookbinder, and printseller at Long Acre and appears to have been prosperous in his new trade, moving to the Strand and dying there of consumption in 1791 (Bryant 1787: xxxiii; Southey (ed) 1831: 156, 162); as he appears in the 1784 poll book as voting from London he must have returned there by that date, but in view of his new trade was obviously not working there as a pipemaker, which the poll-book entry might imply.

The eight new Bristolians in London by 1784 are as follows:

John Andrews: F 1780; voted in St Michael 1781, but voting from London 1784;

John Frederick Bryant jr (see above): B London 1753, fl ca.1774 London, F Bristol 1780, in London as a stationer etc by 1784 when votes from there, D London 1791;

John Frederick Bryant: cousin of John Frederick Bryant above, F 1780; voting from London 1784;

John Edwards: F 1784 and votes in that year from London; votes from London 1812 but from Bristol 1818;

William Lansdown: F 1784 and votes in that year from London; surname also spelt Landsdown and perh. related to the William Lan(d)sdown fl London 1832-48 (Oswald 1960a: 81 and Atkinson and Oswald 1969: 222);

Samuel Pearce sr: F 1754; votes in that year in Christchurch and in St Philip and Jacob 1774 and 1781, but voting from London 1784; referred to as "deceased" when son William F 7 April 1784 - as Bristol voting ran from 3 April to 8 May either Samuel died between 3 and 7 April or his vote cast illegally (the latter possibility is by no means remote, see Section IV above);

Samuel Pearce jr: F 1781; votes in that year in St Philip and Jacob, but voting from London 1784;

William Showell: fl 1775, A 1776, F 1784 (for problem of his being in business before being apprenticed see Section IV above, also Appendix IX); votes from London when takes freedom.

As noted above, there were no contested elections in Bristol after 1784 until 1812. All other evidence suggests pipemaking in Bristol was at a low ebb in the 1780s and 1790s, during which period there was also a succession of bad harvests (Latimer 1893: 485, 515-6, 531); and it would not be surprising if the drift of jobless pipemakers from Bristol to London continued until the beginning of the C19 - it may well have been that there was at one time more Bristol pipemakers in London than in Bristol.

By the 1812 election however, the Bristol industry is regaining its feet, though it is still smaller than it had been at any time in the C18. Twenty-one makers in the city voted in the election of that year, and only three out-voters were recorded, all from London. They were Isaac Bickman, Thomas Cole, and John Edwards, all of whom had been in London or the London area for many years by this time - Bickham and Cole since 1781 and Edwards since 1784. This probably suggests they had been lucky enough to establish a business and make it succeed, but one wonders how many others failed and turned to other occupations. John Frederick Bryant jr records how he went to sea but was turned down because of poor eyesight (possibly caused by the glare from the pipe kiln), and how between periods of unemployment he worked in the London area as a labourer, a jobber at the rope-grounds, a stevedore, a hod-carrier for bricklayers, a member of a press-gang (whose humanity he noted), as well as a pipemaker, and recalls his privations (Bryant 1787: xv-xviii); one may guess that others were no luckier, and indeed may have been less fortunate, for Bryant's story at least had a happy ending, his verse attracting a noble patron who enabled Bryant to set up his business as a stationer, bookbinder, and printseller and spend the remaining seven or eight years of his life in some comfort.

The 1812 poll book also records a feature which, as is also noted in Section VI below, becomes increasingly noticeable as the C19 progresses. This is the concentration of pipemakers in St Philip and Jacob parish, particularly in the out-parish (that is, the part beyond the city boundary until it was absorbed in 1835). Already in 1812 nine of the 21 pipemakers recorded voting in Bristol were in St Philip and Jacob, 6 of them in the out-parish and 4 of these in the Gt Ann St-Gt George St ghetto later known as St Jude's which was to house most of Bristol's C19 pipemakers.

In the main, the C19 trends of the Bristol pipemaking industry are indicated in the table below listing pipemakers' votes cast at various elections divided out by parish.

	1812	1818	1820	1830	1832	1835	1837	1841	1852
Castle Precincts	2	-	-	-	-	-	-	-	-
St Augustine	1	2*	1	-	-	-	-	-	-
St James	3	2	2	-	-	-	-	-	-
St Mary Redcliff	1	-	-	-	-	-	-	-	-
St Michael	-	-	2	-	-	-	-	-	-
St Philip and Jacob In-parish	3	1	1	1	1	1	-	-	-
St Philip and Jacob Out-parish	6	7	9	12	12	10	6	12	10
St Thomas	1	-	-	-	-	-	-	-	-
Temple	4	2	1	6	1	1	-	2	2
sub-totals	21	14	16	19	14	12	6	14	12
OUTVOTERS	3	1	-	4	-	-	-	-	-
totals	24	15	16	23	14	12	6	14	12

*Includes one maker William Okely of Host St who in the 1820 election is listed, though still on Host St, in St Michael. Host St in fact lies in both parishes, the boundary at one point running down the centre of the street. Directory entries of this time indicate Okely's business was on Under the Bank (now the west side of Colston Ave) which is in St Augustine and that he lived on Host St lying directly behind. As no number for his home is given it is not possible to determine in which parish it lay; he may, of course, have changed houses between 1818 and 1820.

As can be seen, the out-parish of St Philip and Jacob rapidly becomes the pipemaking centre of the city, entirely taking over the position St James had had the previous century; and after 1830 is overwhelmingly dominant, with virtually all the makers in the St Jude's ghetto and only Temple of the other parishes having any other pipemakers at all. Outvoters too cease to appear after 1830.

One feature, however, which is not reflected in the poll figures is the steady increase in pipemakers as indicated by directory evidence (see following section): on the evidence of the table above one would suppose the industry to be dying in Bristol from 1830 onwards, when directory evidence indicate the zenith of the industry in the C19 was in fact the 1840s and 1850s, with the rapid collapse occurring only in the 1860s. Why there should be this discrepancy in the evidence is uncertain, but as noted in the preceding section after the 1832 election freedom was no longer an important means of gaining the vote, and this together with the virtual cessation of pipemakers taking their freedom after the 1830s suggests those pipemakers who voted after 1830 did so as conscientious citizens, those who did not being uninterested in the elections and no longer having their votes bought.

The vote-buying orgies of the early C19 elections have already been noted in the preceding section, those of 1812 and 1830 being apparently particularly spectacular. At the former, for example, 75 individuals became freemen by marrying widows of deceased freemen, and it was alleged many of these marriages had been terminated at the church door. As noted in the preceding section only two pipemakers - Jonathan Dark in 1812 (he is actually consistently referred to as a "pipe burner") and John Parker in 1818 - took their freedom by marrying widows of freemen, and whatever their motives for obtaining their freedom thus they did vote regularly at succeeding elections, perhaps suggesting some sense of social duty at least in the case of Parker who voted at elections after vote-buying had ceased. Dark voted in 1812, 1818, and 1820; Parker in 1818, 1820, 1830, 1832, 1835, and 1837. Two pipemakers who took their freedom in 1812 - William Bye (married daughter of a non-pipemaker freeman) and James Kelly (obtained freedom similarly) - and two who became free in 1830 - William Dowdeswell (son of a non-pipemaker freeman) and Richard Moon (son of a pipemaker) - each voted only at the election for which he had presumably taken his freedom: one might suggest these were bought votes of people not really active pipemakers at all, but one must recognize the possibility of their dying or leaving Bristol between one election and the next as equally reasonable alternative explanations. No other references appear to any of these four makers, but the Moon family is certainly recorded up to 1841 and listed as pipemakers in the 1830s.

As noted above, the poll-books recorded how the electorate cast their votes, and from this one can compare how pipemakers voted with how Bristol voters as a whole voted. However, in view of the unashamed manner in which votes could be bought, it would be unrealistic to suppose an examination would reveal any significant political or social trends; and the very small number, proportionately speaking, of pipemakers compared to Bristol voters as a whole makes comparisons of pipemakers who voted for various candidates with proportions of votes to candidates from the Bristol electorate as a whole of very dubious validity.

By and large, pipemakers appear to have voted conventionally enough, the most popular candidates as represented by most votes from pipemakers generally agreeing well enough with those candidates elected. As noted earlier, Bristol returned two candidates representing the whole of the city until the 1885 election, so that voters were allowed two votes (except, for example, in by-elections such as those in 1739 and 1781 listed below where there were only two candidates). A fairly consistent feature of this system was voting for, say, candidates A and B if one exercised both one's votes but if voting for C not to exercise one's second vote (in other words, votes for A and C or B and C tend to be rare).

In the C18 the only occasion on which there appears to have been a possibly significant difference between how pipemakers voted and how Bristol's enfranchised at large voted is the 1781 by-election which as described in the preceding section was the one where Daubeny beat Cruger. Daubeny collected all told 3,143 votes to Cruger's 2,771 but the latter had more than double the votes among pipemakers compared to Daubeny - 31 to 14.

The only other times there appear to have been any significant differences between how pipemakers voted and how the Bristol electorate at large voted were in the 1812, 1818, and 1841 general elections. In the first, pipemakers showed a marked preference for Sir Samuel Romilly (18 votes as compared to 8 for each of the two candidates next most popular with pipemakers) who was in fact unsuccessful, gaining only 1,685 votes as opposed to the successful candidates, Mr R.H. Davis and Mr Edward Protheroe sr, who obtained respectively 2,910 and 2,435 votes.[26] There may have been some political significance here, for though both Romilly and Protheroe were Whigs Romilly represented the progressive elements in that party, who were beginning to be called reformers, whereas Protheroe opposed Catholic emancipation and was to give considerable support to the Tory government, including their suspension of the Habeas Corpus Act in 1817 (Latimer 1887: 51, 82; Beaven 1899: 171).

Romilly in fact withdrew from the election on the ninth day of voting because of, as Latimer puts it (1887: 51), "a coalition between Mr. Davis and Mr. Protheroe, or at least between the two political sections of the West India interest, which heartily concurred in detesting the anti-slavery principles of Romilly". As the Romilly party had placed ca.600 freemen on the burgess rolls (Davis and Protheroe had between them placed ca.1,100 freemen on the rolls) it would be difficult to say whether the pipemakers who voted for him did so out of belief in his political views; but there may have been some sympathy for them, for in the 1818 election, when again a progressive Whig candidate - Col H.D. Baillie - was put forward as an alternative to Protheroe, 12 pipemakers voted for him as opposed to only 3 for Protheroe. Once again, however, Protheroe won, again coming second to Davis. Latimer makes no mention of vote-buying at this election, but he does note that Baillie's supporters petitioned against the return on the ground that the polls had been prematurely closed (there had been only four days' voting) and that nearly a thousand non-resident freemen had been prevented from voting (Latimer 1887: 82). (In 1820 Baillie was again put forward as an alternative Whig candidate, but without his permission, so that he received only 115 votes (Latimer 1887: 88; Beaven 1899: 171) - one was from a pipemaker.)

The 1812 general election was enlivened, as had been the by-election earlier the same year, by "Orator" Hunt, at this time a London blacking maker, presenting himself as a candidate. He had tried unsuccessfully to stand in 1807, having recently started a brewery at Jacob's Wells at Clifton, and was to become famous as a Radical demagogue and champion of such things as annual parliaments and universal suffrage. He obtained only 235 votes in the 1812 by-election but came forward again in the general election - "Mr. Hunt, whose hand was against all respectable persons and parties, offered himself as the champion of democracy", as Latimer (1887: 51) tartly puts it - to collect 456 votes. Of these, 8 were from pipemakers, the same number as that collected by the Tory Davis, though less than half the 18 for the progressive Whig Romilly. Those individualists who voted for Hunt do not deserve to go unmentioned: they were Thomas Appleford, James Huish, William Bye, James Edgar, John Ballard, Arthur Roberts, Thomas Cole, and John Edwards (the last two are listed from London). All save Roberts, who gave his second vote to Protheroe, also voted for Romilly, which together with the large number of votes Romilly received from other pipemakers suggests that in this election at least a working-class radical element did appear.

In 1841 Mr W. Fripp obtained 10 pipemakers' votes but finished last of three with 3,684 votes whereas Mr F.H.F. Berkeley, who was second with 3,739 votes received only 4 pipemakers' votes. Fripp was one of two Conservative candidates, Berkeley being a Liberal; the other (successful) Conservative was Mr P.W.S. Miles who received the votes of 11 pipemakers and was 454 votes ahead of Berkeley. According to Latimer (1887: 256), there was a falling-out between Miles and Fripp which temporarily disrupted the Conservative party in Bristol; but there appear to have been no major local political issues which would have made voters choose one candidate over another, and in view of the marked preference - 21 votes out of 25 - indicated by pipemakers for Conservatives it is possible this does represent a political sentiment among this class at that time. A comparison with votes cast by voters in similar working-class trades might be instructive.

The 1830 election in its turn was enlivened by the candidature of James Acland who since 1827, first in Bristol and then in Kingston upon Hull, had been publishing radical and scurrilous newspapers and feuding over the stamp duty then imposed on such publications when not in jail for libel (Latimer 1887: 118-20, 137-8). Acland, a Radical, obtained only 25 votes, but one pipemaker - James Moon F 1808 fl 1841 - voted for him. It is difficult to determine any significance to this unless Moon, having already cast one of his votes for the only Tory did not wish to vote for either of the two remaining candidates who were both Whigs, and preferred to waste his second vote. Certainly Moon always cast at least one vote for a Tory or Conservative candidate in the elections at which he voted, 1812, 1818, 1820, 1830, 1832, and 1841; on the other hand in 1832 he also voted for Edward Protheroe jr, one of the two Reform candidates at that election, when he had voted for Sir Richard Vyvyan, an anti-Reform Bill Tory, and could have voted for Baillie, who though a progressive Whig was not as advanced in his views as the two Reform candidates and was in fact supported by the Tories as the other Bristol Member for this reason (Latimer 1887: 185-6; Beaven 1899: 172).

In 1832 the conservative Vyvyan and the moderate Baillie were elected over the two Reform candidates, and in so far as the votes of such a small group as the pipemakers' are significant, their votes did accurately represent this, for Vyvyan and Baillie who came first and second obtained 11 and 8 respectively and Protheroe and Williams who came third and fourth, 6 and 3. On this evidence there is nothing to suggest pipemakers at this time at any rate were other than entirely average voters, with no undue radical tendencies. Allegations of wholesale bribery and freedom-buying were made following the election, but apparently no proof of curruption was produced and a committee of the Commons upheld the election (Latimer 1887: 185-6). Political fervour is a fickle thing, however - the previous year (1831) Reform zeal had run so high in Bristol and the two Reform-Whig candidates, Baillie and Protheroe, had swept the seats unopposed, the anti-Reform Bill Tory incumbent from the 1830 election, Davis, withdrawing his nomination (Latimer 1887: 142-3).

With the division of Bristol into four constituencies - North, South, East, and West - voting in 1885, the first election held under this arrangement, indicated Bristol to be predominantly Liberal, only Bristol West returning a Conservative (Latimer 1887: 531; Beaven 1899: 174-5). Bristol East, within which St Jude's fell, was very strongly Liberal, the winner collecting double the votes of his Conservative rival. Bristol East in fact remained Liberal throughout the remainder of the C19, but the first Bristol Labour candidate, J.H. Wilson, stood in that constituency in the 1890 by-election when he collected 602 votes (the Liberal winner received 4,775 votes). In the first 1895 election in the constituency, a by-election, the Socialist H.H. Gore gained no fewer than 3,558 votes, only 182 fewer than Sir William Henry Wills (later Lord Winterstoke)[27] the Liberal candidate; however, in the general election later that year Wills obtained more than double the votes cast for the Labour candidate S.G. Hobson. After the 1890 election no Conservative contested the constituency and in 1892 the Liberal incumbent, Sir Joseph Dodge Weston, was actually returned unopposed.

Unfortunately, no poll-books for Bristol later than 1852 appear to have survived, and in any case after 1872 poll-books were no longer used, but it would have been interesting to trace the trend to liberalism and thence to socialism in the last half of the century (Beaven 1899: 175). With the collapse of the pipemaking industry in the 1860s one might have found an increased tendency towards Liberalism among pipemaker voters; Bristol was consistently Liberal in the second half of the C19 (Beaven 1899: 172-5). By the 1890s the pipemaking industry was almost dead; how pipemakers voted is therefore a largely hypothetical question, but in view of the evidence for pipemaking being a typical industry of small independent craftsmen, the probability is that at least the proprietors of businesses and independent craftsmen would not have voted for the emerging socialism of the period.

The following table compares total votes cast for candidates compared to votes cast for them by pipemakers as noted in the poll-books which have survived and list occupation and for whom votes were cast.

ELECTION	CANDIDATE	TOTAL VOTES	PIPEMAKERS' VOTES
1722	Earle (Whig)	2,141	28)
	Elton (Whig)	1,849	29)
	Hart (Tory)	1,743	19
1734	Elton (Whig)	2,428	22)
	Coster (Tory)	2,071	27

	Scrope (Whig)	1,866	18)
1739 (by-election)	Southwell (Whig)	2,651	43
	Combe (Whig)	2,203	18
1754	Nugent (Whig)	2,592	27
	Beckford (Tory)	2,245	26)
	Philipps (Tory)	2,160	28)
1774	Cruger (Whig)	3,565	36)
	Burke (Whig)	2,707	26)
	Brickdale (Tory)	2,456	16
	Clare (Tory)	283	0
1781 (by-election)	Daubeny (Tory)	3,143	14
	Cruger (Whig)	2,771	31
1784	Brickdale (Tory)	3,458	23)
	Cruger (Whig)	3,052	21)
	Daubeny (Tory)	2,982	22
	Peach (Whig)	373	4
1812	David (Tory)	2,910	8
	Protheroe sr (Whig)	2,435	6
	Romilly (Whig)	1,685	18)
	Hunt (Radical)	456	8)
1818	Davis (Tory)	3,377	13)
	Protheroe sr (Whig)	2,259	3
	Baillie (Whig)	1,684	12)
1820	Bright (Whig)	2,997	16)
	Davis (Tory)	2,811	12)
	Baillie (Whig)	115	1*
1830	Davis (Tory)	5,012	19)
	Baillie (Whig)	3,378	15)
	Protheroe jr (Whig)	2,842	7
	Acland (Radical)	25	1
1832	Vyvyan (Tory)	3,697	11)
	Baillie (Whig)	3,159	8)
	Protheroe jr (Reform)	3,030	6
	Williams (Reform)	2,741	3
1835	P.J. Miles (Conservative)	3,709	9)
	Vyvyan (Conservative)	3,313	8)
	Baillie (Liberal)	2,518	4
	Hobhouse (Liberal)	1,808	2
1837	P.W.S. Miles (Conservative)	3,839	4)

	Berkeley (Liberal)	3,212	1
	Fripp (Conservative)	3,156	5)
1841	P.W.S. Miles (Conservative)	4,193	11)
	Berkeley (Liberal)	3,739	4
	Fripp (Conservative)	3,684	10)
1852	Berkeley (Liberal)	4,681	7)
	Langton (Liberal)	4,531	6)
	McGeachy (Conservative)	3,632	6

(Pipemakers' votes followed by a closing round bracket denote whichever combinations of votes were most common - this tendency has been noted on p.532 above.)

*Binding of poll book makes it impossible to see if pipemaker William Okely used his second vote - if so, it went to Baillie. His first vote went to Bright.

SECTION VI:

TRENDS IN PIPEMAKING AS SEEN IN THE TRADE DIRECTORIES, 1775-1921; AND IN THE CENSUSES, 1841-1911

Trade directories for the major British cities begin to appear in the later C18. They are particularly valuable not only because they replace, with annual entries, the failing apprentice and freedom rolls as sources of information but because they supply for the first time addresses, from which accurate distribution of makers can be made and economic and sociological patterns deduced. By the second quarter of the C19 directories have become sufficiently well-organized to have trades classified alphabetically, greatly facilitating their use; and classification by street follows, enabling conclusions to be drawn about various areas of the city.

Trade directories, however, are not famous for detailed accuracy, and the quality of the directory differs considerably from place to place. Bristol directories, at least those published by Matthews from 1794 to 1879, appear markedly less accurate than those of Glasgow also studied by this writer; and those for Glasgow show a noticeable improvement when the Glasgow Directory is replaced in 1828 by the Glasgow Post Office Directory.

The earliest Bristol directory is Sketchley's, in 1775. It is followed in 1783 by the Bristol section in Bailey's Western and Midland Directory.... In 1785 there appears The Bristol Directory and in 1787 the Bristol section of The Bristol and Bath Directory known variously as Bailey's or Routh's, followed by the Bristol section in vol 2 of The Universal British Dictionary of Trade, Commerce, and Manufacture in 1971 and Reed's The New Bristol Directory for 1792. The first Matthews's directory, entitled for the years 1793-94, appeared in 1794; it appeared again in 1795, 1797, 1798, 1800, 1801, 1803, 1805, and thereafter annually until it became Wright's directory in 1880. This appeared annually up to 1917, then biennially until 1923, in which year it became Kelly's and appeared annually until 1940, since when it has appeared at varying intervals and is at present biennial. The last entry for pipemaking appeared in the 1921 directory. Various other C19 directories, either for Bristol or including Bristol in a larger area, were available to the writer. These were: The Bristol Index, or Evans' Directory, for 1817 and 1818; Robson's Directory of London and the Western Counties for 1837; Pigot's Directory for 1842; Hunt and Co's Bristol and Welch [sic] Towns Directory for 1848; Hunt and Co's Directory and Topography for the City of Bristol.... for 1850; Slater's (late Pigot's) Directory for 1852-53; Scammell and Co's Bristol General Directory for 1853; the same company's Gloucester, Bristol and South Wales Directory for the same year; the Goucestershire, Herefordshire, and Shropshire Post Office Directory for 1856; Kelly's Post Office Directory of the City of Bristol for 1863; the Bristol and District Trades' Directory for 1899, 1900, 1901, 1902-03, and 1903-04; and Sharp and Co's New Bristol Directory for 1904.

Despite the problems which arise from using Bristol trade directory evidence - divergent or contradictory entries not only between different directories for the same year but between the various sections within one directory,[28] for example - the pattern of the resurgence and final collapse of the Bristol pipe industry in the C19 can be seen clearly enough from the directory entries. So too can the sudden appearance of the industrial western suburb outside Lawford's Gate - later known as St Jude's - as a veritable pipemakers' ghetto.

As a brief example of the complexitites of directory entries one can note the divergent listings of pipemakers in three directories all for 1853 - Matthews's; Scammell and Co's Bristol General Directory....; and Scammell and Co's Gloucester, Bristol and South Wales Directory. The first lists 21 makers, the second 17, and the third 27. Of the 17 in Scammell's first directory, 14 are to be found (ignoring minor differences) in Matthews's; seven that Matthews's has do not appear and three that it does not have are added. Of the seven omitted, two do not appear after 1853 in Matthews's directories, but the remaining five are known to have continued for some years - as late as 1876 in two cases. Of the three additions, two are of names which had been in previous Matthews's directories - one 1850-51, the other 1847-48 - while one is of a maker not noted in Matthews's directories until 1856. The fact that the Ring pipemaking concern is still referred to in Scammell's as being R.F. Ring when in Matthews's it had been changed to J. Ring and Son three years earlier suggests Scammell's information is not as up-to-date as Matthews's on all counts; on the other hand the listing of Joseph Pearce in Scammell's three years before that individual's appearance in Matthews's suggests some independent checking of sources. The other Scammell's directory for the same year, however, the Gloucester, Bristol and South Wales Directory, lists not only all 21 makers noted in Matthews's but two of the three additions offered by the other Scammell's and four others besides. Of the four new names, two never appear in Matthews's directories, though both are listed in Hunt and Co's Directory of 1850. Of the other two, one appears in Matthews's both before (1847-50) and after (1854-63) the 1853 Scammell's entry. The single person listed by the first Scammell's directory but not in the second is of the individual who had appeared in Matthews's directories for 1850-51.

If one wishes to add a comparison with the entries in Slater's (late Pigot's) Directory for virtually the same period - this directory is listed as for 1852-53 - yet more complexities appear. Disregarding minor discrepancies or differences (for example, the Ring entry still under R.F. Ring, the George business under Thomas George I when he had been dead 17 years, the Saunders and Guy business listed under Guy only) all makers listed in Matthews's directory for 1853 are included. In addition, one from Scammell's Bristol directory appears, two from Scammell's directory covering the West Country and South Wales, and one common to both Scammell's directories are included; while two makers who do not appear in Matthews's or other directories until later in the 1850s or the 1860s and one - Joseph Champ and Co - entirely unknown from other sources are also listed, making a total of 28. (However, as noted in Appendix IX, it is very doubtful if Champ and Co were in fact pipemakers; they actually appear to have been tobacconists and snuff-manufacturers.)

It is clear from all these listings that dealing with directory entries is not a simple matter, nor is it a straightforward case of deducing which directory plagiarized another - clearly, differing sources were being used by the various compilers. In all, the non-Mathews's directories examined and noted above had eight pipemakers who never appear in any Matthews directories:

John Davis (Hunt 1850);
John Gane (Hunt 1850, Slater 1852-53, the second Scammell 1853);
Arthur Roberts (Pigot 1842);
Mary Roberts (Hunt 1850, second Scammell 1853);
Joseph Champ and Co (Slater 1852-53);
P. Norman (Kelly 1863);
C. and G. Pardoe (Kelly 1863);
P. Roberts (Kelly 1863).

In addition, there is a tendency for these directories, when they do list makers also appearing in Matthews, to list them at an earlier date than the first Matthews entry: an example of this is Joseph Pearce, listed in Matthews only for 1856 but appearing in Pigot 1842, Slater 1852-53, and both Scammell directories for 1853. Whether there is any significance to this is uncertain: it is possible Matthews overlooked or did not bother with small makers, but certainly if these makers could be listed in more general directories one would think they would want to be included in a specifically Bristol directory such as Matthews's.

The first Bristol directory, as noted above, appeared in 1775, the year the American Revolution broke out and the Bristol pipe industry, already seriously weakened by the Stamp Act trouble of ten years earlier, collapsed with the disruption of its remaining export trade to the American colonies (see Section VII(b) below). Eleven pipemakers were recorded that year, four of them in Lewin's Mead, one each in nearby Horse St (now Host St) (FIG 149) and Lower Mauldlin Lane (now St), and one across the Frome in Halliers' Lane (now Nelson St). Two more worked in Temple St in Redcliffe; one in West St, near Lawford's Gate but inside the city; and one, William Showell, in Houlton St, outside the city to the west and very near the area where later Bristol pipemakers were to congregate so markedly. Halliers' Lane was apparently a thoroughfare of "old hovels" prior to its clearance and reopening as Nelson St in 1799 (Latimer 1893: 496), but Lewin's Mead at this time was still a respectable part of the city and not the slum it had become by the 1830s and 1840s (cf Latimer 1893: 421, 438 and 1887: 174, 296): the four pipemakers noted lived in the company of two aldermen and an expensive Quaker school.[29] Further, one of the four was John Frederick Bryant sr (listed as John Bryant at 61 Lewin's Mead in the directory) whose son, John Frederick Bryant jr, recorded in 1787 that his father had employed ten journeypeople and had had a profitable enough business to keep himself, his wife, and their nine children in some comfort until the Stamp Act troubles of 1765-66 ruined the oversea trade (Bryant 1787: viii, vii).

Clearly Bryant sr had been a successful businessman and factory-owner, and as such had lived the life of a socially-respectable citizen. This is borne out by his son's recollections about family life in the prosperous times before the Stamp Act. He, the son, had been able to indulge his leanings towards the arts while the father, an amateur violinist skilled enough to be asked sometimes to play at the Assembly Rooms, was acquainted with most of the Bristol and Bath musicians, who sometimes held their rehearsals in the Bryant house (Bryant 1787: vii) - which last point suggests a home of some size. Even after Bryant sr's business had been reduced to a shadow of its former prosperity he was apparently still a respected citizen, for his son, who wanted against his father's wishes to go to sea, remarked it would have been useless for him to look for a ship in Bristol "my father being so well known and respected in that city, that I should not easily have found a merchant or master of a vessel that would have employed me without his consent" (Bryant 1787: xv). Because the son does not suggest anywhere in his reminiscences that the father was the leading Bristol pipemaker, it is perhaps reasonable to assume he and the three other makers who lived in Lewin's Mead - Israel Carey, Susannah Lee, and William Nicholas - were of comparable prosperity. If so, they were presumably the four wealthiest pipemaking concerns in the city, though possibly Anna Viner working in Host St should be added to these four, as her pipes have been found on two North American archaeological sites.

Certainly all, including Viner, were long-established Bristol pipemakers: Carey had been apprenticed in 1748 and become free in 1756, and was still working in 1787; Lee was the widow of John Lee A 1741/2, F 1749, fl 1765, and she is last recorded in 1785; Nicholas had been apprenticed in 1723 and become free in 1730 - this 1775 reference is the last known to him. Anna Viner was the widow of George Viner A 1740, F 1747, fl 1757, who had also exported to North America, and she is noted working until 1805. Bryant sr himself belonged to a pipemaking family, his father John having been apprenticed 1709 and become free 1716, and his two sons John Frederick jr and Samuel, his brother Samuel, and his brother's sons Isaac and John Frederick all taking their freedom in Bristol as pipemakers. John Frederick sr had taken his freedom in 1747, but not liking pipemaking had gone to London and worked as a journeyman house-painter. He married in London and remained there until 1760, when he was persuaded by a Bristol relative to return there and take up his original trade. If these five makers were indeed the major Bristol firms, and all, like Bryant, had employed about ten journeypeople, then the industry even in its lessened state compared to that in the first three decades of the century employed a fair number of Bristolians. If, like Bryant, they all had to let go their journeypeople when the industry declined sharply in the 1760s and 1770s with the effect on oversea trade first of the Stamp Act and then of the American Revolution, a considerable number of Bristol families must have been affected.

The next directory, that of 1783, indeed suggests a calamitous reduction in the size of the industry, for it lists but two makers, and while this is probably an under-estimation of the number surviving on the basis of subsequent entries, the number listed between this time and the end of the century remains between five and seven. Purely in numbers of firms - it seems legitimate to use the term for at least the bigger businesses such as that of Bryant sr - therefore, the total in Bristol appears to have been halved by the American Revolution, and if Bryant jr's account of his father's subsequent poverty and his own extreme difficulty in earning a living by pipemaking in the 1770s and 1780s is typical of the other pipemakers who struggled on - and it surely must be - then these few probably used no assistance save for their family in the attenuated remains of a once-profitable business.

The revival of the Bristol industry, in terms of the number of makers -

or more realistically, firms - recorded in the directories is not noticeable until the 1810s. With it comes the sudden movement of firms to the area beyond Lawford's Gate, so that by 1815 half or more of the makers are living in the Lamb St-Gt Ann St-Gt George St area, which remained outside the city until 1835. Excluding the William Showell noted above working in Houlton St (the extension of Wade St north across the Frome) in 1775, and Robert Carter F 1767 who voted in 1784 from St Philip and Jacob Out-parish after having been in St Michael and St James at the 1774 and 1781 polls respectively, the first pipemaker to appear in the area beyond Lawford's Gate was Nicholas Kennicott, who took his freedom in 1809 and first appears in the directory for 1810, in Lamb St. In 1815 no fewer than 7 of the 13 listed makers were living in this area. At the height of the Bristol industry in the C19, in 1850 for example, 17 of the 23 makers listed lived in this area.

Why there should have been this sudden shift by the industry at this time is not clear, though it is not without parallel in the trade elsewhere, a comparison of the census returns for 1851 and 1861 in Bath showing 8 pipemakers in Bridewell Lane and only one in Milk St in the former year but none in Bridewell Lane and no fewer than 21 in Milk St a decade later (Brown and Brown 1974: 25, 27-8). However, the area beyond Lawford's Gate had been a predominantly industrial suburb of the city since development of the area had started in the early C18 (see Section VIII below), and with the revival of the pipemaking industry under makers who appear to have owed relatively little to the C18 traditions of the industry the new area no doubt seemed logical and convenient. As noted in Section V above, the C18 industry prior to the collapse following 1775 had concentrated especially in St James parish and from all that one can deduce about its makers and their craft, worked inside the city; in the early C19 city guilds were dead and there were good economic reasons for moving just outside the city. Taxes and rents would no doubt have been lower over the Gloucestershire border (which until 1835 ran through the back of the New St Properties), employees' wages would have been lower, what city restrictions there were regulating employment or the use of properties - for example limitations on trades which involved fire or other hazard or offensive sounds, sights, or smells - would not apply. As noted earlier (p.364), a Cheapside property lease forbade pipemaking among other offensive trades - most of them noisome - and in 1858 the smell of hearthstones (whiting blocks for fireplaces or doorsteps, often made by pipemakers) were included in the characteristic mixture of smells of a Camberwell slum. After 1835 it seems safe to say the city took little interest in its new possessions beyond Lawford's Gate; in the second half of the C19 St Jude's (as it became after 1849) was probably the poorest area of Bristol and remained so well into this century (see Section VIII below).

The resurgence of the Bristol industry in the 1810s as reflected in directory entries may have been slightly premature, for by 1820 the number of makers recorded has come down to 9, but there is a slow rise throughout the 1820s and there can be no doubt of the rapid growth in the 1830s, for the number of makers recorded in 1830, 1835, and 1840 respectively jump from 12 to 18 to 21. Judging from the number of makers recorded, the high-water mark of the Bristol pipe industry in the C19 was the earlier 1840s to the later 1850s, during which time 20 and more makers were consistently recorded.

The final crash, when it comes, is sudden. Between 1861 and 1867 the number of makers recorded drops from 18 to 7, and while there is an isolated rise in 1870 to 10 the number recorded throughout the 1870s consistently averages five. By 1900 only three makers survive, and from 1912 onwards only one firm, that of Thomas George and Co of Gt George St and Old Market St, survives, to fire its last load of pipes on 9-12 December 1921 and bring an end to a 300-year old Bristol industry.

The following figures, given for five-yearly intervals from 1795 to 1915 and all taken from Matthews's directories and their successors, Wright's, illustrate this revival and final fall:

1795	6	1860	18
1800	6	1865	10
1805	8	1870	10
1810	9	1875	5
1815	13	1880	6
1820	9	1885	3
1825	11	1890	5
1830	12	1895	3
1835	18	1900	3
1840	21	1905	2
1845	18	1910	2
1850	23	1915	1
1855	19		

To talk of the period of the earlier 1840s to later 1850s as the zenith of the Bristol pipemaking industry in the C19, however, is not to suggest it was a period of any prosperity for those working in the trade, unless it be in contrast to the period after the industry had collapsed and many of those who had earned a precarious living amid the squalor of St Jude's must have been out of work. A survey of "the moral and physical condition of the labouring classes and poor of the city and vicinity of Bristol", in the form of a series of letters appearing in the Examiner from August 1850, describes the lot of a pipemaker in some detail at just this period.

Writing in the first of these letters, which appeared in the issue of 17 August 1850, the anonymous correspondent notes pipemaking was "another staple manufacture of the district" and that most of the workers were women "employed at the small 'factories' by persons who regularly carry on this trade". From this it is clear that the names appearing in the directory entries, or at any rate most of them, were indeed those of the business owners. However, the observer noted that "So soon...as a family can accumulate funds to enable them to set up an oven and purchase a mould and a little clay, it is not unusual for them to do so, and manufacture for themselves". This observation too is in line with deductions made from directory entries - succession of occupiers at the same property, for example (see below). The pipes were hawked round the public-houses in the city, but the competition thus produced had, according to the observer, reduced prices to such a degree that there was now very little profit in the trade.

The work of a widow who had taken to pipemaking on the death of her husband, a seaman, in order to keep herself and her young family, is described. The manufacturing process is noted in 2: VII. Although the widow was "not strong enough to be very expert in the business" she could when fully employed - which was not always the case - make nine gross pipes a week, the gross being reckoned as 180. Assuming she worked a six-day week she thus could make one-and-a-half gross pipes a day; from the description of their manufacture it is clear she alone did the entire process up to firing - rolling, moulding, and trimming - except for the preparation of the clay, which she paid a man to do. She was paid 4d per gross of 180, or 3s a week, and out of this paid the man who prepared the clay 5-1/2d.

The rest of the family income comprised 2s a week from a son who picked horsehair and 1s a loaf of bread weekly from the parish towards the support of her youngest child, who was a girl aged five or six. The entire weekly income for this widow and her family of three was therefore, even at the best of times, 5s6-1/2d plus a loaf of bread. Of this 1s6d went on rent for their three rooms (which had come down 3d since the husband had died) and most of the rest on bread, which was cheap. Because the only quality of butter they could afford was so bad and the amount in any case so small the bread was normally eaten dry. Potatoes were eaten twice or three times a week; at the most half or three-quarters lb of meat was bought a week, on the Saturday, and made to last as long as possible into the next week. In the week previous to the reporter's visit three lb of "griskin bones" (the griskin is the lean part of the loin of a bacon pig) had been obtained at 2d a lb; mutton and beef cost 5d or 5-1/2d a lb. The remaining expense was 2-1/2d for an oz of tea, which measured out in amounts equivalent to a large thimbleful, lasted the week. (Two elder girls worked away from home; the older occasionally gave her mother a dress.)

The family sitting-room was for the locality, the observer said, reasonably furnished. It had three or four wooden chairs, two small tables, "a fender &c., and other small matters". In an open cupboard was an array of ill-matched crockery; there were some glass and earthenware ornaments, several small coloured prints, a glass globe full of salt hanging from the ceiling - this was described as a favourite type of ornament among the poor - a branch of coral, and two religious pictures (the family was Baptist, having joined that faith because they found they could understand what was being said better than in the Anglican church).

Such was the life of a probably average pipemaker, though perhaps more proficient makers earned somewhat more by being able to produce ca.3 gross pipes a day, a figure which appears to have been about average (see 5: II). Assuming this figure, they would have produced ca.18 gross a week and earned ca.6s a week - double that of this widow. However, in his second letter (24 August) the correspondent noted that another woman pipemaker, considered an expert, had assured him her earning never averaged more than ca.4s a week. Further, work was "just now so scarce that but little is given to anyone who cannot obtain an order for pipes, to the value of the labour they are required to perform" - in other words, the makers had to find orders big enough to cover production costs and their own wages. Within the previous three or four years, the same woman averred, the large export trade in pipes to the United States and Canada had almost entirely ceased.

This last comment is of interest because it coincides with the growth of the Glasgow pipe industry (4: IV) which was certainly specializing in the

North American trade by the 1840s and acquired almost a monopoly there until towards the end of the century. It is, however, at variance both with the trade directory evidence (above), which shows that at least in terms of numbers of businesses recorded, the 1840s and 1850s saw the height of the Bristol industry and that its final collapse was not until the early and middle 1860s; and with the census data (see below), which clearly indicates that in terms of numbers of employees with these firms the zenith of the industry was the years on either side of 1851 and that the collapse was indeed in the 1860s. In a sweated industry such as pipemaking was in the C19, however, work must always have been erratic, and it may be that the decline in available work at the time the Examiner's correspondent was writing in 1850 was no more than a temporary, though frequently-recurring, phenomenon of the trade. As noted in 1: VII(e) a swing back to pipes from cigars was noted by 1838 and this trend continued into the 1850s: it is therefore possible the decine in North American exports - which agrees with North American archaeological evidence, inasmuch as the relatively few Bristol pipes known from C19 contexts there are probably all in first-half-of-the-century contexts (see 6: VII(b)(4)) - was offset by increasing home demand and that it was the introduction of the brier in the later 1850s (1: VII(h)) which sealed the fate of the Bristol clay pipe industry. On this point, a study of the Bristol port-books should resolve matters; unfortunately, the examination of these by Jackson and Price (R. Price in litt. 18 January 1974) has not gone beyond 1818, with the C19 figures up to that point showing a fluctuating but not noticeably increasing trade, apart from a colossal figure (relatively speaking) for 1815 presumably marking the return of trade with the United States following the War of 1812, 1812-14 (no pipes at all had been exported from Bristol to the United States in 1813 or 1814).

What the business proprietor got from his factory can only be guessed at, but as a number had other investments - the George family, for example, were landlords of properties in the area according to descendants of the family, and as noted below other occupations for makers do appear in the directories - it may be suspected that some at least were modestly prosperous until the crash in the 1860s. The life of the actual maker of this period, however, was one of poverty and a grind of hard work when the work was available: a description such as this of 1850 adds much-needed flesh and bones to the bare skeleton provided by trade directory statistics.

As noted in Sections III and IV above, the apprentice- and freedom-roll entries suggest there was a retrenchment of the pipe-industry into family businesses after ca.1740. As noted earlier in this section the four businesses located in Lewin's Mead in 1775 and that of Anna Viner, which are likely to be the five major Bristol firms at that date, all represent well-established concerns; and an examination of the 11 firms listed in 1775 reinforces the impression that the pipemaking industry already held the seeds of its own decay, for with few exceptions all the makers listed were elderly and to judge from the decline in apprenticeships and freedoms were producing few heirs and successors. This in turn would agree with the observation from the freedom rolls that with the revival of the industry from ca.1805 onwards new names were appearing to replace the old families.

The following tabulation of known information on the pipemakers listed in the 1775, 1805, and 1815 directories bears out this contention:

1775

*John [Frederick] Bryant [sr]: F 1747, fl 1753-60 London, fl 1760 Bristol, D there ca.1777; son of a pipemaker John Bryant, father of two more, John Frederick and Samuel, brother of a pipemaker Samuel, uncle of two more pipemakers, Isaac and John Frederick;

*William Carey: A 1757, F 1767, fl 1775; two brothers Israel (see below) and Henry pipemakers, Israel's family pipemakers for two more generations (see below);

*Israel Carey: A 1748, F 1756, fl 1787, D by 1791; two brothers William (see above) and Henry pipemakers, son John (see under 1805) and grandson (or great-grandson?) Israel III (see under 1815) pipemakers;

William Cope: fl 1775-91, D by 1794; wife Mary fl 1794-95;

*Joseph Edwards [sr]: F 1747, fl 1792 (with son); third generation of pipemaking family dating back to Henry Edwards A 1689 F 1699, father Jonas I pipemaker, aunt Susannah married Thomas Thomas pipemaker, two brothers Jonas II and John I pipemakers, son Joseph II (see under 1805) pipemaker;

*Susannah Lee: widow of John Lee A 1741/2 F 1749 fl 1765, recorded 1775-85;

*William Nicholas: A 1723, F 1730, fl 1775;

Edward Pearce: fl 1775, poss. a confusion with Eli Pearce F 1766 fl 1774 in St John parish where Hallier's Lane (where Edward Pearce is recorded in 1775) was situated, fl St Thomas parish 1781; several other Pearce pipemakers recorded in Bristol in C17 and C18;

William Showell: apparently the William Showell apprenticed the year after this 1775 entry and F 1784, in London during 1784 election (the problem of this maker is discussed in Section IV above);

*Edward Sunderland or Sinderlin: A 1726, F 1739, fl 1775; father of William Sinderlin pipemaker, poss. related to several pipemakers Sinderling or Sunderland in Bristol in C17 and C18;

*Anna Viner: widow of George Viner A 1740 F 1747 fl 1757, recorded 1775-1805.

Of these 11, 8 - those asterisked - were all long-established Bristol pipemakers either by virtue of the length of time they themselves had worked there, or beause their family had long traditions in the industry in Bristol, or both. William Nicholas and Edward Sinderlin must have both been ca.65 in 1775. Including in the eight the deceased husbands of Lee and Viner (as founders of their widows' businesses) all save William Carey had taken their freedom before 1750. So far as one estimate age from dates for apprenticeship or freedom William Carey must have been born ca.1743 and the others over the period ca.1710-35: with the exception of William Carey, therefore, this group were all middle-aged or older, particularly considering life-expectancy in the C18 - they must all have been (or in the case of Lee and Viner, would have been) between 40 and 65.

As noted when discussing the decline of the Bristol guilds (Section II(d) above) the city finally abandoned its attempts to enforce freedom as a prerequisite for practicing a trade in the 1770s after an unsuccessful attempt in 1772 to prosecute a baker who had not served the statutory seven years' apprenticeship. This abandonment is visible in this 1775 list, for at least two pipemakers, Cope and Showell - and a third, Pearce, if indeed he is not the Eli Pearce F 1766 - were openly in business without being free, and there is no record of Cope ever taking his freedom though he and after him his wife were in business within the city for at least 20 years.

1805

*John Carey: exact identification very confused - a descendant of Israel Carey (noted under 1775), either the son F 1780 or a grandson; the problem is discussed in Appendix IX;

*Joseph Edwards [jr]: F 1774, with father (noted under 1775) in 1791-2 as indicated by entry "Edwards and Son", entry "Joseph Edwards" alone 1794-1823 presumably mainly if not wholly Joseph jr;

*Martha Oakley or Okely: widow and second wife of John Okely F 1768 fl 1791-8 but not noted in earlier directories, recorded 1800-12; husband's first wife Elizabeth daughter of Thomas Jenkins F 1733 fl 1754 and sister of Joseph Jenkins F 1768 fl 1784;

William Pike and Co: fl 1805-12;

*Samuel Richards: F 1774 and in London during election in that year, fl 1781-1812 Bristol and possibly later (difficult to separate from son Samuel III F 1812); third generation of pipemaking family dating back to Richard Richards A 1703 F 1713, father Samuel I, uncle Thomas, and son Samuel III all pipemakers;

John Ring and Co: fl 1803-83 or 1884 under various members of the family, the original John Ring I F 1806;

*Anna Viner: as entry for 1775;

John Mates Young: fl 1803-06, listed as an auctioneer and broker 1800; Mary (presum. widow) fl 1807-08.

In 1805, therefore, five of the eight pipemakers still belonged to old-established pre-American Revolution pipemaking families - John Carey, Joseph Edwards II, Martha Okely, Samuel Richards II, and Anna Viner. Of these, two - Okely and Richards - belonged to families not listed in 1775; possibly their members were working then as journeymen for other firms rather than being in business for themselves.

Here too there is evidence of makers no longer bothering to take their freedom as pipemakers: John Ring was in business at least three years before becoming free, while Pike and Young are never so recorded.

1815

*John Carey: as entry for 1805;

*Israel Carey: F 1812, fl 1812-29;

*Joseph Edwards [jr]: as entry for 1805;

*Thomas George: B ca.1765-70?, F 1812, fl 1815-37 [sic], D 1835, family in business to 1921;

*William Oakley or Okely: in business with mother 1806-12, F 1812, fl 1813-27;

Roberts and Steevens: listed for 1815 only, succeeded by Thomas Roberts 1816-35 (and Co 1816);

Ring and Cookworthy: noted in directories 1810-17 only, actually founded 1802 (see Appendix IX);

Sarah Ring: fl 1815-17;

James Sanders or Saunders: F 1812, fl 1815-38, associated with Down 1839-49 and Guy 1850-60, the latter being listed for one more year alone

(Saunders, however, possibly D sometime after 1841 - see Appendix IX);

James Sheffield: first appears as Sheffield and Haynes fl 1809-12, then alone fl 1813-25;

Joseph White: fl 1813-17;

Thomas Williams: fl 1815-21.

By 1815, as can be seen from the asterisks denoting those makers belonging to the old families, under half - 6 out of 13 - were of that category. The Carey, Edwards, Okely, and Richards families still continue, and Thomas George I joins the group by virtue of having married Ann daughter of John Okely II F 1768 and sister or half-sister of William Okely. The remainder of the makers listed are new names with no known Bristol pipemaking antecedents.

Again, makers are appearing openly without ever taking their freedom, and this has now become common. Neither partner of the Roberts and Steevens firm appears to have been a pipemaker freeman; and Sheffield, White, and Williams equally appear without ever taking their freedom, at least as pipemakers. Cookworthy of the Ring and Cookworthy concern was never a freeman pipemaker while the other partner, Robert Ring, was apparently a potter earlier who had taken his freedom as a hooper.

By 1830 the list of Bristol pipemakers includes only members of the George family as representatives of the ancien regime. Israel Carey III last appears in 1829, William Okely in 1827, Joseph Edwards II in 1823, and Samuel Richards III in 1817 (though the Okely family may have gone to London and Richards certainly continued in Swansea, being noted there in 1830). However, Philip Guy listed in 1861 and associated with James Saunders or Sanders (see 1815 list) 1850-60 must be the Philip Guy A 1812 to William Okely and F 1818 so he too is a representative (by apprenticeship) of the old pre-American Revolution pipemaking families.

It is also possible that members of the Bryant and Carey families worked as pipemakers into the second half of the C19, though they do not appear in any directory entries. The last Thomas George, who died in 1968 in his 96th year, made two lists of pipemakers he apparently remembered in the latter part of last century. One, written September 1952 and repeated in October, is headed 1880, but in a footnote Mr George says all save one (in one version) or two (in the other) he could "remember quite well in 1878" (when however, he was only five or six years old). This list includes a Bryant (no first name) on Bread St. The other list, containing some different names and written a few months later, in January 1953, includes an E. Carey working at the "Blue Factory, Great George St". This factory is presumably the Blue Works noted on the 10.56 ft to the mile OS plan of 1885, though in fact it was on River St, which runs along the SE bank of the Frome (or did until the latter was enclosed from this point onwards in its course to the Floating Harbour) and approximately parallel to Gt George St. This Carey may well have been a descendant of Israel Carey II, for the latter's directory entries (see below) suggest he occupied property which extended from Gt George St to River St (cf Section VIII below). (The list written September and October 1952 has a David Cox making pipes at the Blue Factory or as the October version has it, the "Blue Lead Factory". Mr George did not remember Cox well.)

The George family itself continued until 1921, having outstayed their last competitors in the city by ten years. Their tradition by inheritance and apprenticeship goes back, therefore, to John Okely's first father-in-law Thomas Jenkins, free 188 years earlier when the Bristol pipe industry was at the height of its prosperity.

Another sign of changing times is the appearance of pipemakers' businesses specifically called "companies". J. Thomas (1971: chapts 1 and 2, pls 48-51) notes the Staffordshire potteries evolving from an essentially cottage industry in the later C17 and earlier C18 through the master-craftsman family businesses of the mid-C18 to the factory stage of the late C18. Weatherill (1971: chapts 4 and 5) has shown that these changes were taking place earlier than Thomas had dated them, for even in the C17 the Staffordshire pottery industry was not a typical domestic industry and by the early C18 it was certainly not domestic in organization, and before 1760 it was moving towards the factory stage; but the basic trend seems certainly accurate, and some similarities to this progression can be seen in the Bristol pipemaking industry. Thomas notes (1971: 10) that from ca.1780 onwards literature on The Potteries talks of "manufactories" where Plot in 1686 and early C18 writers had talked of "potworks"; and in Bristol's first trade directory of 1775 one of the 11 pipemakers listed, Anna Viner, calls herself a "pipe-manufacturer". In the next directory, that for 1783, where she is one of only two pipemakers listed, she calls her business a "tobacco-pipe manufactory". Subsequent entries simply call her a pipemaker, but even if the earlier titles are conceits they indicate an awareness of the difference between the humble maker and the more prestigeous manufacturer - indeed, as Anna Viner pipes have been found on two sites in North America (see Section VII(b)(4) below) it can be supposed that the Viner business had some pretensions to fame. When John Okely II took George Godwin apprentice in 1795 he too was described as a pipe "manufacturer".[30]

(Robson's Directory of London and the Western Counties for 1837 divides Bristol pipemakers into "tobacco pipe manufacturers" and "pipe makers", listing nine makers in the former category and six in the latter. While this may simply be the result of haphazard organization by the directory compilers it is possible it represents a differentiation based on scope or size or simply pretentiousness of business. Unfortunately, too little is known about the businesses listed to be able to say whether the "manufacturers" were a superior group to the "makers". The Ring and White businesses (see below) are certainly listed under "manufacturers", as is the George business.)

The first pipemaking concern specifically listed as a "company" is that of John Ring and Co, first appearing in the 1803 directory and continuing as noted above as a family concern until 1883 or 1884. By 1805, again as noted above, the business of William Pike and Co had appeared, to continue until 1812. In fact, this change from an essentially family business to a small factory concern was a typical reflection of changes consequent on the industrial revolution in the later C18. Already by the 1770s John Frederick Bryant sr had been employing ten journeypeople (see reference above) and some at least of his contemporaries - Anna Viner for example - must have been employing comparable numbers, indicating that the old family businesses of the master, his wife, and two or three of his children or a couple of apprentices were passing. Pipemakers like Bryant sr were approaching the employer-merchant stage, to judge by Bryant jr's description of his family's social life and the then-respectable area in which they and several other pipemakers lived. That this was not restricted to the pipemaking industry in Bristol is indicated by a reference of ca.1800 (quoted in Oswald 1970b: 228 n.6) to there being seven pipemakers in Liverpool who employed among them 60 workmen and about as many women, giving an average of ca.17 employees per business. As already noted (4: II), the Liverpool pipe industry had rapidly expanded from the 1760s and appears to have taken over Bristol's export trade, so their pipe-manufacturers' employing nearly double the number of workers ca.1800 that Bryant and other leading Bristol makers had been employing ca.40 years previously is not surprising.

Even before the Ring entry of 1803, however, Bristol directory entries were indicating this change towards business firms - the 1783 directory lists the business of "Israel Carey and Son", suggesting the two were in formal partnership rather than the son being apprenticed to or merely earning his keep working for his father, while the 1791 and 1792 directories record "[Joseph] Edwards and Son", suggesting the same arrangement. In 1806 Martha Okely and Son are recorded at Under the Bank (where the west side of Colston Ave now stands) and continue in business until 1812, after which the son, William, continues alone. In 1812 it is noted the Okelys lived in Host St, immediately behind their pipemaking premises at Under the Bank; in 1821 Okely was living at Kingston's Buildings (now demolished), Kingsdown, an address which suggests he was now well-enough off to live in the suburbs, for Kingston's Buildings, off Portland St, appear on the very northerly extreme of the built-up area of Bristol (indeed, outside the city limits) on the map accompanying Matthews's first directory in 1794, and even on the map in Matthews's 1853 directory are still near the then-open expanse of Cotham. This separating of residence and place of work is also a sign of changing social arrangements (cf Latimer 1887: 3; also 4: VI). The appearance of joint concerns, as indicated by firm names, starting with Ring and Cookworthy founded in 1802 and Sheffield and Haynes first listed in 1809, is another indication of the changing industrial pattern of the time.

With the C19 comes a diversification of interests on the part of certain firms. From 1813 William Okely also advertises himself as an "importer of tobacco-pipe and potters' clays", an occupation eminently suitable for his business address, which was by the side of the Frome and served by the Floating Harbour. In 1818 and 1819 Okely added "and Co" to his name, and The Bristol Index directory for 1818 notes after the company's name "clay and General Merchants Tontine Warehouse No 9", suggestng Okely was expanding his business interests. In 1821 his entry reads "tobacco-pipe manufacturer, Brown Stone Potter, and Importer of Tobacco-Pipe and Potters' Clay" and in 1822 he is at Redcliff Backs on the Avon part of the Floating Harbour, with a retail shop at Redcliff Hill. He is missing from the 1824-26 directories, however, and when he reappears in 1827 it is at St John's Bridge, near his original address at Under the Bank, but in a much less favourable spot for the clay trade which he still advertises. He has changed his private residence too, for he is now at Neyler's Cottages, Horfield. This in in fact the last reference to Okely in Bristol, though a William "Okeley" appearing as a pipemaker in London in 1836 and a Mrs Amelia Oakley and presumably her son Alfred also listed in London 1850-58 (Bloice in Atkinson and Oswald 1969: 222) may be the Bristol William Okely and his widow and son, for his wife's name was certainly Amelia ("Okely" is the earlier spelling of the name, used here throughout for consistency but by the end of the C18 frequently being replaced by Okeley or Oakley).[31]

Okely was not the only Bristol pipemaker associated with the pottery trade - the Rings, perhaps the most important Bristol pipemaking firm in the earlier C19 (and certainly the only Bristol firm of the period whose products have so far been found in North America), were originally a pottery firm, and a branch of the family continued in the wholesale and retail side until 1860, though after 1816 the pottery production business passed to Carter and Pountney and later under the latter family. With various name changes, the firm still exists, though it moved to Cornwall in 1970. The pipemaking branch of the Ring family were also coal-merchants as early as 1819, however, and from 1850, when what appears to be the third generation of the family takes over the firm, the entry appears as "coal merchants and export tobacco-pipe manufacturers", suggesting the former was now the major business of the firm. The firm also dealt in clay by the 1840s.

In fact, the Ring family is probably the only family associated with Bristol pipemaking in the C19 which achieved enough business success to live fashionably in residential areas as did the White, McDougall, and A. Coghill families in Glasgow (see 4: IV) and the Henderson family in Montreal (see 4: V), Richard Frank Ring being recorded living in mid-century at Hensgrove House at Brislington, an area at that time still in Somerset and beyond urban Bristol.

The Pardoe family who returned from Bristol to restart the Nantgarw pottery works in 1833 concentrated on pipes there rather than on pottery, however (I.J. Williams 1932: 111), and possibly for this reason opened a pipeworks back in Bristol which first appears in the directories in 1847. This enterprise appears under the kname W.H. Pardoe, presumably the William Henry Pardoe who refounded Nantgarw and continued there until his death in 1867 (I.J. Williams *loc. cit.*); subsequently to 1854 he appears to have handed it over to a relative, possibly two sons, for the 1863 entry - the last - lists the firm under the name C. and G. Pardoe.

A number of other pipemakers list themselves as involved in the pottery business, but most of them appear to have wholesaled or retailed pottery while actually manufacturing only tobacco-pipes. Thus Sarah Ring, for example, advertised in 1815 as "China, Glass and Earthenware Warehouse, wholesale, retail and for exportation and manufacture of tobacco-pipes".

One family which does appear to have extensive interests both in pipemaking and pottery-production is that of White. This family is of more than usual interest, as members emigrated to Canada in the early 1860s and also produced pipes and pottery there. This enterprise has been covered in some detail by Collard (1967: 253-6 and refs, 265-6 and refs, 346 s.v. Poole & Foley, 350 s.v. White, Joseph & Sons, pls 36 and 37a) but as her account gives far more detail than the frustratingly vague information available from Bristol directories it is recounted here.[32] Joseph White III (1799-1870), who ultimately came to Canada, was the son of another Joseph, a potter, and was apprenticed to the potter J.D. Pountney as a turner in 1814. Joseph III and his younger brother James started a pottery business in Bristol in 1828 and produced Rockingham and black teapots, fancy stoneware jugs, and utilitarian articles such as spirit kegs glazed with clear leadless glaze, presumably the glaze perfected in Bristol ca.1835 by William Powell. By 1855 the two brothers were prosperous enough to retire, but a few years later Joseph III decided to try a new career as a potter in Canada.

The earliest White pipemaker to appear in the Bristol directories is the Joseph White listed in New St, St Jude's, from 1813 to 1817. This certainly cannot be Joseph III, who was only born in 1799, and seems likely not to be his father Joseph II for reasons noted in Appendix IX (s.v. White, Joseph III). The Joseph White noted as a pipemaker 1829-45 at Rich's Buildings, Redcross St - a stone's-throw from New St, but inside the city - is perhaps more likely to be Joseph II. In 1846 another pipemaker is listed at Rich's Buildings and White's entry is missing, but a Joseph jr and James White appear in 1847 at Baptist Mills and continue to be listed there until 1862. According to Pountney (1920: 268), Joseph jr and James had worked together at Redcross St from 1828 but moved to Baptist Mills in 1840 following a dispute with their father, Joseph sr (Joseph II), who was also their landlord at Redcross St; whether this James is the James White pipemaker at 10 Gt Ann St 1837-43 is unknown, though perhaps not likely. In 1829 the Rich's Buildings business is listed as "tobacco-pipe manufacturer, China and Staffordshire warerooms", and in 1847 as "Egyptian black, and Rockingham teapot, stone jug, and tobacco-pipe manufacturers", a list which corresponds exactly (minus initially the pipes) with the products noted by Collard in Canada.

In 1847 a William White appears at Rich's Buildings (the pipemaker who appears there for 1846 moves), listing as his business the imposing if grammatically weak title - "black and Rockingham teapot, stone jug, and fire-clay chimney-pot and tobacco-pipe manufacturer, Staffordshire warehouse".[33] He is listed in Matthews's directories until 1851, and in 1852 his plurality of occupations - minus the pipemaking - is taken over by another (though Slater's (late Pigot's) Directory for 1852-53 and Scammel's Gloucester, Bristol, and South Wales Directory for 1853 both continue to list William at Redcross St). Interestingly, the Slater reference indicates William manufactured pipes for export. This cannot, however, be Collard's William Daniel White, for he was born only in 1833 (see below); chronologically it could be a brother of Joseph III and James.

This leaves two Whites who appear in the directory entries unaccounted for: Daniel, noted as a pipemaker in Wade St, 1840-41; and Jacob, who appears only in Hunt's Directory for 1850, at 16 Gt Ann St. If they are near relatives of the above Whites they too could be brothers of Joseph III and James.

In 1858 a son of Joseph III, William Daniel White (1833-74) left Bristol to seek his fortune in the goldfields of western North America, and a younger son, Frederick J. (1838-1919), followed his brother to the New World, arriving in Saint John, New Brunswick, Canada, after a short time in the neighbouring province of Nova Scotia. It was Frederick who learned of a small pottery for sale at Crouchville (now East Saint John) and returned to Bristol to persuade his father Joseph III to emigrate to New Brunswick together with Joseph's wife, another son, James A. (1841-1928), and two daughters. (According to members of the George pipemaking family interviewed by the writer in Bristol in 1969, the White family was related to them. A note among papers of the last Thomas George (1872-1968) says James White of Baptist Mills pottery "married one of the Georges...went to America & was supposed to leave a Fortune no one to claim it". This Baptist Mills James White cannot have been Joseph III's younger brother James, for the latter never went to North America: if the story is true - and which George married this White seems unknown - it must have been James A. White (1841-1928), Joseph III's youngest son and eventual sole owner of the Crouchville pottery, who married into the family. He left, alas, no fortune.)

The Crouchville works, known as the Courtenay Bay Pottery, was run by the Whites from the early 1860s to the end of the 1880s; it was devastated by fire in 1885 and went bankrupt a few years later. The products of the firm included the Rockingham wares, clear leadless glazed stonewares, and tobacco-pipes of the Bristol factory, and were well-enough thought of to be bought by dealers as far away as Montreal in 1878; the firm also dealt in china, glass and earthenware, presumably imported from Britain. Joseph III died in 1870 and in 1875 his son Frederick J. returned to Bristol to assist the widow and young children of his eldest brother Joseph (see family tree) run the Bristol business, leaving James A. to continue the Courtenay Bay business. His other brother William Daniel, having failed to find his fortune in the goldfields, worked in the pottery for a short while but was said to have been a dentist by profession. Frederick J. and a son eventually returned to North America in 1893 to produce fine stonewares at 1546 S. Logan St, Denver, Colorado, where initially they had financial difficulties from the depression at that time. Frederick J. died there December 1919; when Pountney was writing (1920) one of his sons was living in Bristol, another in Cardiff (Pountney 1920: 270).

No Whites are recorded making pipes at Baptist Mills after 1862, but the Courtnay Bay concern was exhibiting and advertising pipes in the 1880s. In 1880 a travelling exhibit from Manitoba which had been at the Dominion Exhibition in Montreal that year moved to Saint John and took with them back west samples of White's pipes, saying (according to a local newspaper reporter) that the pipes were better than those imported into Manitoba from Scotland. The enthusiastic reporter's suggestion that clay pipes would join canned salmon and lobster as exports to western Canada was, alas, never fulfilled - the era of the clay pipe was dying and the Courtenay Bay Pottery appears never to have recovered from its fire five years later.

(One of Joseph III's daughters, Charlotte Amelia, married James Foley, a son of whom, James W., set up a pottery business with a Samuel Poole ca.1880 which continued until ca.1900. Subsequently each operated an independent pottery, Foley's becoming the Foley Pottery Ltd in 1921. As the Canuck Pottery (Quebec) Ltd it was re-located at Labelle, ca.80 miles

NW of Montreal, in 1964 following the destruction of the Saint John works by fire. Foley's grandson, Fenwick D. Foley, continued the family potting tradition. The firm of Poole and Foley were making tobacco-pipes, along with the usual range of Rockingham and other wares, flower pots, etc, in 1883 - the pipes were described by a reporter as of "a superior quality". In Bristol the White family continued their pottery business at Baptist Mills until the last partner died in 1875, after which his executors ran it until 1891 (Pountney 1920: 269-70); what appears from directory entries to be the firm's successor, (White's) Yate Pottery, continued at 40 Broad St, ending ignominiously as the Yate Fire Clay and Brick Company.)

The White family is exceptional, partly because a good deal of material on their history is available. Other connections between pipemakers and various trades are ephemeral and much less spectacular. James Sheffield, successor to (or possibly simply continuator of) the firm of Sheffield and Haynes (fl 1809-12) appears in 1813 as a dealer in tobacco as well as a pipemaker, and he adds the occupation of grocer in 1815 and broker in 1818 before he appears for the last time in 1825. Sheffield, however, was obviously a businessman of wide interests; other pipemakers who had a second trade generally appear to have been individuals running small independent businesses with few if any assistants beyond their family and adding other occupations to make an adequate living. George Gay, for example, who appears as a pipemaker from 1832 until 1863 when he disappears with the final collapse of the Bristol pipemaking industry, was also a carpenter throughout this time and from 1852 is listed as an undertaker as well. Edward Hill, who first appears in Hunt and Co's 1850 *Bristol Directory*, appears in Matthews's directories from 1852 to 1876 as a pipemaker and chimney-sweep, and it is probably he who appears at a different but nearby address in 1877 as a chimney-sweep alone before disappearing entirely.

Other examples occur. James Saunders who took his freedom as a pipemaker in 1812 because he had been apprenticed 1777 as a "china painter" to Richard Cooksworthy and continued in business for a long time first by himself, then as Sanders [sic] and Down, and then as Sanders and Guy, until 1860,[34] appears in 1826-28 as a maltster as well as a pipemaker. George James, who appears irregularly between 1817 and 1840 as a pipemaker - mostly in Lewin's Mead, which by this time was a slum (see above) - is also listed as a "biscuit baker" for the years 1826-28 (it is possible, however, he was better off then his Lewin's Mead address might suggest, for the entries for 1827-29 and "Clifton" in brackets after Lewin's Mead, conceivably indicating he lived in that residential suburb.) James presumably died ca.1840, for though no more references appear in Matthews's directories, a Mary James, presumably his widow, is listed in *Pigot's Directory* for 1842, again in Lewin's Mead.

The William Pike of Wm Pike and Co recorded as making pipes on Christmas St 1805-12 is presumably the William Pike recorded at the "Globe" on Christmas St 1803-21, suggesting his pipemaking venture was a side investment to his primary occupation as a publican rather than vice versa. Samuel Rich, noted making pipes 1879-81 at Albert St, St Philip's Marsh, came from a potting family which had worked in that area since at least 1865. Products appear to have been firebricks and drainpipes. Typical of the poorer craftsmen who pursued several occupations in order to make ends meet, Rich was also a beer-retailer, and his ephemeral essay into pipemaking resulted in his premises being called from 1880 onwards the "Pipemakers' Arms", under which title it still exists (FIG 146 - the present landlady (1969) says the property was originally called Avon Cottage; as such it is marked on Ashmead's plan of 1828 (FIG 147), indicating it is of some age). From 1881 the family are also grocers, and from 1891 they run a "general shop".

Such combinations of occupations were restricted neither to Bristol nor to pipemaking. Many of the Birmingham gunsmiths combined that craft with other occupations such as publican, shopkeeper, or even gentleman (Wise 1951: 70). In Bath several C19 pipemakers had a second trade: Joseph Champion II, fl 1833-56, was also listed as a fireman; Joseph Sants, fl 1837-71, was also listed after 1852 as a potter, as were subsequent members of his family; and Abraham Jones, fl 1846-54, was also listed as a lodging-house keeper. From about mid-century Sants and Jones styled themselves pipe-manufacturers, as opposed to mere pipemakers (cf p.548 above), Sants in the 1851 census being described as a "master pipe manufacturer", suggesting these individuals were at least claiming to have superior businesses. Another Bath pipemaker, James Clarke - A 1796, F 1804, fl 1833 - is first recorded in the directories as pipemaker and Mayor's Officer. He was elected Sergeant at Mace in 1824 and is then no longer listed as a pipemaker, but in 1829, after a City Council decision that Sergeants at Mace not be concerned in any other business, he resigned that position and in 1833 is once more listed as a pipemaker (Brown and Brown 1974: 24, 25). In Leicester also, several pipemakers were involved last century in more than one trade. In the second decade Richard King combined pipemaking with a grocery and chandlery shop. Between the 1820s and the 1840s Robert Bennett combined pipemaking (including the refiring of used pipes) and brush-making, and eventually gave up pipemaking to concentrate on brush-making, founding a prominent local firm. The Salisbury family business dating to before 1800 listed itself in the 1840s as "China-and-glass dealer and pipe-manufacturer" in a fashion already noted among Bristol pipemakers (Daniell 1965: 59-60). The unusual combination of glove-making and pipemaking is recorded in Derbyshire in the earlier C19. William Robinson jr of Brampton near Chesterfield was the son of a potter and pipemaker, William sr, working in the second half of the C18, who had given up the potting half of his business in order to concentrate on pipemaking but had apprenticed his son to a Nottingham draper: the son subsequently set up business in Chesterfield manufacturing gloves for the London market, apparently using at one time among his workers French officers taken prisoner of war during the Napoleonic Wars; but as his father grew older the son took a considerable share in the pipe business, frequently sending shipments both of gloves and pipes to London, and after his father's death in 1812 carried on the pipe business very successfully (Robinson and Spence 1937: 145). In York too pipemakers doubled trades in the C19 and C20: Reuben Aray was a tobacco- and snuff-dealer as well as a "tobacco pipe manufacturer" when listed in 1823, while the firm of Thomas Waddington and Son, the last York pipemakers, were latterly also drysalters in the 1920s and 1930s (R. Hill 1955). As noted earlier (p.506), the Glasgow pipemaking firm of John Waldie and Co advertised in 1909 and 1910 that they were also "bath brick and firelighter merchants"; while the Portchester, Portsmouth, firm of Leigh and Co advertised themselves as "Wholesale Dealers in Pipe-Clay, Bath-Brick and Hearthstones" as well as dealing in pipes, putty, and whiting (C. Green 1973a). Dealing in pipeclay, putty, and whiting were obvious sidelines for a pipemaking concern (p.172 above) - indeed, the Edinburgh pipemaking firm of Christie's produced blocks of whiting for ca.20 years after it had stopped manufacturing pipes, finally closing in 1962 (p.341 above). The Manchester firm of pipemakers, W.H. Pierce and Co, one of whose pipes have been found at Fort Laramie, Wyoming 1834-1938 (R.L. Wilson 1961: 133, 131 pl V,5 and 1971: 21, 64 fig 8,E) first appears in the trade directories in 1864 as "dealers in tobacconists' fancy goods" and subsequently as "importers of fancy goods", "importers of tobacconists' fancy goods", and "importers of tobacconists' fancy goods, meerschaum pipes and cigars" before adding pipe-manufacture to the list in 1877 together with advertising as agents for "J. & P. Lewey (London), cigar manufacturers". In 1879 the company appears with its most impressive listing,

> tobacco pipe manufacturers, importers of tobacconists' fancy goods, manufacturers of silver screw bands, rims, covers etc. and cigar importers, and agents for J. & P. Lewey (London), cigar manufacturers.

The firm continued to be listed as pipe-manufacturers and importers of tobacconists' fancy goods until 1901; what seems to have been a branch, listed simply as W.H. Pierce (no "and Co") and later with W.H. or William Pierce and Co appended in brackets, is listed from 1871 first as a tobacconist, beer retailer, and dealer in fancy goods, and subsequently simply as a dealer in fancy goods until 1895 when this business too lists itself as pipemakers and also continues until 1901 (Manchester Public Libraries *in litt.* 1 February 1974). Chadwick (1973: pl 211) shows W.H. Pierce and Co's premises at 3 Watling St, Shudehill, where the directories record the firm 1884-85: they appear to have had the second storey of an at least three-storey brick warehouse and liberally advertised themselves on their frontage, each of three windows having PIPES/CIGARS advertised on their lower parts and three medium-sized noticeboards flanked by two large-sized ones being attached to the wall between the windows. The left-hand board reads IMPORTERS/OF/MEERSCHAUM/PIPES/BRIAR PIPES/CIGAR/TUBES/FRENCH/DUTCH/& IRISH/CLAY/PIPES; the three medium-sized boards are all marked W.H. Pierce/*& cº*/, the left-hand of them continuing CLAY PIPE/Manufacturers/WORKS/KIRK STREET, the centre one reading IMPORTERS/OF/TOBACONNISTS/FANCY GOODS, and the right one CIGAR/MERCHANTS; while the extreme right board is too far away to have anything more than isolated words visible - those that can be read are PIPE STEMS, VESUVIANS, and PRACTICAL (Vesuvians were a form of smokers' match designed to light outdoors in all weathers invented in 1849 and used throughout the C19, though by 1926 they were little used (Christy 1926: 150-1; 1928: 291, cf Betjeman 1969: Fig 75)).[35]

It is possible in fact that the majority of Bristol pipemakers had other sources of revenue: a grand-daughter of the last Thomas George pipemaker remembered he was a landlord of some of the dwellings in the area, and was soft-hearted about collecting rent from his poorer tenants. Evidence for this sort of investment would not appear from trade-directory entries, though it would from the as-yet unstudied property-deeds of the St Jude's area (see Section VIII below). Certainly a large enough proportion combined pipemaking with other occupations to suggest that pipemaking in Bristol even at the time of its greatest number of makers in the C19 - the years on either side of 1850 - was a below poverty-level trade for those engaged in the actual manufacture (cf 1850 reference above). (In the C20, as their pipemaking business drew to a close, the George family diversified at their market St property - now demolished for the Underpass - becoming involved in glass-bottle importing, a garage, and the "Bunch of Grapes" public house in the 1910s-1930s.)

Apart from Elon Golding (fl 1850-63), who listed himself as a "plain and fancy glazed pipemaker", and Thomas John Corcoran's detailed advertisement in the 1892 Wright's directory listing "Irish, Straws and Meerschaum Patterns...Assorted cutties" and offering to stamp the customer's name and address on the pipes, there is little to indicate Bristol produced a varied repertoire of pipes; the listing (see below) in 1884 of a Bristol agent for Southorn of Broseley pipes suggests Bristol pipemakers did not aspire to the heights achieved by their forerunners 150 years or so earlier. William Pratt, listed as a pipemaker 1835-43, added "and Mould" after his address for his first four years, indicating there was at least one local source of moulds for Bristol pipemakers who wished custom-made designs.

As noted above, the 1841 census abstracts are the first to present a detailed breakdown of occupations. Unfortunately both the type of evidence and the manner in which it is presented tend to vary with each census, so that it is difficult to make detailed comparisons between census years, but the abstracts do present useful information nevertheless.

In 1841, a total of 226 pipemakers, of whom 85 were male and 141 female, were recorded for "Bristol City, with Barton Regis Hundred". Sixty-four of the males were twenty years of age or over and 21 were under twenty, while 108 of the females were twenty or over and 33 under twenty.

In 1851 the pipemaking evidence in the abstracts is slightly obscured by the inclusion of an "others" group along with that of pipemaker. What these "others" were is not known: in 1881 and 1891, as noted below, "Snuff Box, &., Maker" was added to the entry for pipemakers, but the 1841 and 1861 abstracts make no additions to their entries and it seems unlikely the "others" represent a significant addition to the 1851 total. The 1851, 1861, and 1871 abstracts all group pipemakers in the category including earthenware manufacturers and earthenware and glass dealers, so presumably the "others" must have been in closely-allied occupations; the 1871 abstracts do actually have a separate "Others" entry in this category with two such individuals noted in Bristol.

The total number of pipemakers "and others" recorded for Bristol in 1851 is 260, of whom 94 were male and 166 female. Of the males, 68 were aged twenty or over and 26 were under twenty; of the females, 126 were twenty or over and 40 were under twenty.

In addition to the above data, the 1851 abstracts give a breakdown by five-year groups of the ages of employees: here, figures for Bristol are not available, the city being included under Gloucestershire, but as the Gloucestershire total of pipemakers is only nine more than that already given for Bristol the figures can be regarded as representative of Bristol pipemakers. The breakdown is as follows:

Age	MALES	FEMALES
5-9 yrs	-	1
10-14 yrs	13	10
15-19 yrs	15	26
20-24 yrs	13	29
25-29 yrs	15	24
30-34 yrs	13	16
35-39 yrs	15	14
40-44 yrs	8	5
45-49 yrs	6	5
50-54 yrs	3	8
55-59 yrs	4	4
60-64 yrs	3	8
65-69 yrs	-	3
70-74 yrs	1	4
75-79 yrs	-	2
80-84 yrs	-	1
TOTALS	109	160 = 269

The 1851 abstracts also give some evidence for the number of workers employed in various trades by individual Masters, but unfortunately this is a very incomplete listing - the preamble to this section indicates that many, in some trades all, masters omitted this information. These figures also are not available for Bristol separately but only for Gloucestershire, but as is discussed later they too are of use when considering Bristol pipemaking, patchy though they are. In fact, only five master pipemakers in Gloucestershire recorded the number of their employees, three indicating they had 3 employees each, one that he had 5 and one that he had between 30 and 34.

In 1861 the abstracts list only those employees aged over twenty for Bristol, and these returns are divided into two areas labelled "Bristol" and "Clifton", the former having 13 males and 27 females and the latter 44 males and 106 females, giving a total of 190 pipemaking employees over twenty all told.

The appearance of 79% of this total in "Clifton" is at first sight astonishing; however, "Clifton" is presumably the Clifton Union set up under the Poor Law Reform Act of 1834 to include northern suburban Bristol and which included St Jude's (see p.1075 below). Assuming this to be the case, the division used here turns out to be very useful, for in recording 40 pipemakers over twenty in "Bristol" it is presumably recording those who were working within the central area of the city, and as the 1861 trade directory lists four pipemaking businesses in this general area an idea of the average number of employees per firm can be estimated with more accuracy than could be obtained simply by dividing the gross number of makers recorded by the gross number of firms. As the 1861 abstracts do not repeat the unsuccessful attempt of ten years earlier to have masters indicate the number of their employees, this fortuitous division of the city enables these figures to be calculated with some expectation of accuracy despite the lack of direct evidence.

The 1861 abstracts, like those of 1851, give a breakdown of pipemaking employees by age groups. Again, Bristol is included with Gloucestershire. The groups are slightly different from those in the preceding abstracts, the five-year groupings being used only up to age 24, and ten-year groupings being used thereafter; however, much worse, because the only Bristol figures are for makers twenty and over while the Gloucestershire figures cover the whole age range, there is instead of a negligible difference between the Bristol and Gloucestershire totals such as the nine more Gloucestershire makers noted in 1851, a sizeable difference of 51, for the Gloucestershire total of 241 makers now includes two unknowns: non-Bristol makers of all ages and Bristol makers under twenty. Faute de mieux, the Gloucestershire breakdown of ages for 1861 has to be used as evidence to judge the statistics for the Bristol pipemaking industry, but obviously, while the 1851 and 1861 figures could be compared directly if one wished to consider the Gloucestershire industry they cannot be so well compared when trying to estimate trends in the Bristol industry, for there are only indirect means of estimating how many of the 28 Gloucestershire pipemakers under 20 worked in Bristol. Obviously, however, the vast majority of them must have been Bristolian: elsewhere, the 1861 abstracts indicate there were at least 16 Gloucestershire pipemakers twenty and over outside Bristol - 13 in Gloucester and one each in Stroud, Tewkesbury, and Thornbury - which gives an upper limit of 228 to the total number of Bristol makers of all ages. The breakdown by ages is as follows:

Age	MALES	FEMALES	
10-14 yrs	-	4	
15-19 yrs	4	20	
20-24 yrs	8	19	
*25-34 yrs	18	45	
*35-44 yrs	23	37	
*45-54 yrs	10	15	
*55-64 yrs	9	7	
*65-74 yrs	7	13	
*75-84 yrs	2	-	
TOTALS	81	160	= 241

*10-yr periods

In 1871, the abstracts present their evidence in much the same way as in those for 1861. In Bristol a total of 105 pipemakers aged twenty or over are recorded, 35 of them male and 70 female.

Once again a breakdown by age groups is available for Gloucestershire pipemakers (the same groups as ten years previously except that all employees over 75 are lumped together), and once again this includes employees under twenty years of age. A total of 133 pipemakers of all ages is recorded for Gloucestershire, 28 more than the Bristol total; elsewhere the abstracts note 5 makers aged twenty or over in Gloucester, but this still leaves 23 makers under twenty unaccounted for, though undoubtedly the vast majority must once again have been in Bristol. The breakdown is as follows:

Age	MALES	FEMALES	
10-14 yrs	-	3	
15-19 yrs	5	9	
20-24 yrs	4	5	
*25-34 yrs	2	16	
*35-44 yrs	8	28	
*45-54 yrs	12	16	
*55-64 yrs	10	7	
*65-74 yrs	2	3	
**75 and over	2	1	
TOTALS	45	88	= 133

*10-yr period

**more than 10-yr period

In the 1881 abstracts pipemakers, now in the category "Persons working and dealing in Tobacco and Pipes", are lumped together with "Snuff Box, &c., Maker[s]", an indication of the decline in the trade; and this adds a degree of uncertainty as to the number of actual pipemakers working. However, the totals given for Bristol - 89 all told, 16 male and 73 female - clearly show that however many "Snuff Box, &c., Maker[s]" were bolstering this total it was far too little to offset a very large decrease in the number of pipemakers working compared to that for ten years earlier (the 1881 abstracts do not appear to say what age group these numbers are for, but presumably it was as in previous abstracts those aged twenty and over). There is no breakdown by age group available in the 1881 and subsequent abstracts.

In the 1891 abstracts, the same classification is in effect, and by this date Bristol recorded only 47 "Tobacco Pipe, Snuff Box, &c., Maker[s]", 12 of them male and 35 female.

In the 1911 abstracts, the last examined (the 1901 and 1921 abstracts, at least those volumes held by the Department of Statistics in Ottawa, do not appear to have the relevant entries and the Bristol pipe industry closed in Decembr 1921), pipemaking, still associated with snuff-box makers and "etc", has declined to the category of "Other, General, and Unidentified Workers and Dealers", sub-category "Sundry Specified Industries"; and only figures for Gloucestershire, this time for employees aged ten years and over, are available. A total of 43 are recorded, 17 males and 26 females (8 unmarried, 12 married, and 6 widowed).

As stated earlier, the census data does give useful information despite the varying ways in which it is presented: in particular, it is useful because it covers the period when the Bristol pipe-industry, on other evidence, reached its zenith in the 1850s and then finally and dramatically collapsed in the 1860s.

Earlier (pp543-4), the variant evidence of the Examiner's correspondent's recording in 1850 that the pipe-industry in St Jude's had suffered a serious relapse in the 1840s due to the loss of the North American trade and the trade directory evidence which suggested it was not until the 1860s that the industry collapsed was discussed: so far as the census figures are concerned, their evidence agrees with the trade directory evidence, for taking the figures for employees of both sexes aged 20 and over (the only figures which are available for all the abstracts) the trend is as follows:

year	number of pipemakers (census abstracts)	number of pipemaking businesses (trade-directory entries)
1841	172	19
1851	194*	23
1861	190	18
1871	105	7
1881	89**	5
1891	47**	4

*includes "others" (see above)

**includes "Snuff-Box, &c., Maker[s]" (see above)

It is clear from these figures that the major contraction of the industry did indeed occur between 1861 and 1871, when the number of employees was nearly halved and the number of firms was reduced by rather more than half. Between 1841 and 1851, on the contrary, the number of employees actually increased, and whatever was meant in the latter census by adding "others" to the pipemaking total it is unlikely, as indicated earlier, that this added an appreciable number; and between 1851 and 1861 the number of employees remained virtually the same. As indicated earlier (pp543-4), the loss by Bristol makers of their North American market does seem to coincide with the rise of Glasgow to dominate the North American clay pipe market, so if one assumes the loss noted by the Examiner's reporter in 1850 as being the result of this change and presumably a permanent loss one must postulate that the Bristol industry was able to expand its home market sufficiently to gain enough sales to stabilize and even increase staff until ca.1860; and as noted, there is contemporary evidence from the late 1830s into the mid-1850s that clay pipe smoking had revived in Britain, at least partially at the expense of cigars.

The second major reduction in employees, that noted between 1881 and 1891, is proportionately speaking an even greater drop than that between 1861 and 1871, though again the precise figures are obscured because pipemakers have been grouped with other artisans - here snuff-box makers and "etc" - but this time there is no corresponding reduction in the number of firms surviving and one must assume the sharp decline reflects a major attrition in number of employees while the businesses themselves hung on. The final figures, those for 1911, are for Gloucestershire, but virtually all, if indeed at this late date not every one of them, must have been in Bristol; the total, 37 - once again including snuff-box makers and "etc" - suggests numbers of employees had levelled out somewhat. Finally, as noted above, in the two years prior to George's closing in December 1921, the firm had been employing 3 pipemakers; presumably this figure excluded the George family members and the firm may have had one or two odd-job men in addition such as a furnaceman and some packers, but almost certainly the total involved in those last days would not have reached double figures all told.

Although the only common figures for numbers of employees throughout the period covered by the census abstracts are those for employees aged 20 and over, and even these are imprecise because of the "others" added in 1851 and the "Snuff Box, &c., Maker[s]" added in 1881 and 1891, some reasonable estimates can be made for the entire pipemaking population of the period. The 1841 figure, as already noted, is known to be 226; and that for 1851, 260 minus an unknown, but almost certainly negligible, number of "others" - say a total of ca.258. In 1861, as noted when discussing the abstracts for that year, the total number of Bristol makers must lie between the 190 recorded there as aged twenty and over and 228, the latter a figure deduced by taking the Gloucestershire total of 241 pipemakers of all ages and subtracting from it the 13 makers twenty and over known from other evidence in the abstracts to have been working in various specific locations in the county but outside Bristol. Certainly, the vast majority of Gloucestershire makers aged twenty and over must have been in Bristol, so the Bristol total figure must be much nearer 228 than 190 - a figure of ca.220 would appear to be reasonable. This indicates there must have been a sharp reduction in the number of employees aged under 20, for as noted above there were almost identical numbers of employees aged 20 and over in 1851 and 1861; as will be noted later, this bears out other evidence dealing with the final collapse of the industry.

For 1871, as already indicated when discussing the evidence above, the total figure for Bristol makers must lie between the 105 recorded aged twenty and over and 128, a figure deduced in the same manner as above, namely taking the Gloucestershire total for makers of all ages, 133, and subtracting the 5 known to have been twenty and over and working in Gloucester. Again, the vast majority of Gloucestershire employees under twenty must have been in Bristol, and a figure for the total number of ca.123 for Bristol employees of all ages would appear reasonable.

The figures for 1881 and 1891 are rather more difficult to estimate, for there is no means of knowing how many "Snuff-Box, &c., Maker[s]" were included in the available figures, which again were for makers aged twenty and over. These would obviously have to be subtracted before adding any numbers for pipemakers under twenty; however, by this time, with the pipemaking industry virtually dead, there can have been very few young people, if indeed perhaps any, entering the trade, so that it is highly unlikely that any addition of young people would have cancelled out the non-pipemakers included in the figures from the abstracts. The number of snuff-box and whatever other makers were included in the total cannot really be estimated, so the numbers of pipemakers can only be roughly guessed at, but they would probably be appreciably lower than the 89 and 47 given respectively in the 1881 and 1891 abstracts for the totals including non-pipemakers. Rough estimates of ca.70 and ca.35 respectively for the number of pipemakers are therefore suggested here. In summary, therefore, the total numbers of all ages employed in the Bristol pipemaking trade over the period covered by the census abstracts can be given as follows:

1841	1851	1861	1871	1881	1891
226	258*	220*	123*	70**	35**

*approximate figures
**rough estimates only

As noted above, the 1851 abstracts give a breakdown, albeit very incomplete, of numbers of employees for each Master. Only five master pipemakers in Gloucestershire supplied this information, but even so, useful deductions can be made from this. In 1841, 226 men, women, and children were recorded in the trade in Bristol and the trade directory for that year noted 19 pipemaking businesses in the city. In 1851 ca.260 men, women, and children are recorded in the industry and 23 businesses were noted. Both these sets of figurers indicate a consistent average of ca.11 employees (plus the Master) per business, a figure which holds remarkably steady for 1861 and even 1871, by which time the industry had collapsed. As noted above, however (p.522), many Bristol pipemaking establishments must have been no more than small family concerns, probably simply the man with his wife and three or four assistants, either members of his family or journeymen - a size which would agree with that indicated by the number of employees recorded by four of the five masters who gave this information in the 1851 census - so figures of up to ca.30 employees for the largest firms such as George's and Ring's would not be unreasonable.

Whether individuals such as the St Jude's woman noted in Section IX below and 5: II above who made pipes in her own home and sold them to the local firms for firing - in effect working as a contractor - would have been considered by these firms as among their employees, is, however, doubtful; nevertheless, at least one firm at the time of the 1851 census did employ over 30 people, one master being listed with between 30 and 34 employees. Although Bristol masters are not separated in the Gloucestershire entries for this evidence, it is certain that the master with the 30-34 employees worked in Bristol, for the same census notes only nine pipemakers in Gloucestershire outside Bristol. One can conclude, therefore, that at least one Bristol firm, presumably either George's or Ring's, did indeed employ ca.30 workers in the mid-C19 but that this was unusually large for Bristol pipemaking establishments of the time; the four Gloucestershire makers with 3 and 5 employees are almost certainly much more representative of the usual-sized, essentially home industry, pipemaking business of the time.

As noted above, for the purposes of the occupations returns in 1861, Bristol was divided into two areas labelled "Bristol" and "Clifton". The latter, as indicated above, is presumably the Clifton Union set up under the Poor Law Reform Act of 1834 to include northern suburban Bristol and which included St Jude's. This division turns out to be very useful, for by recording 40 pipemakers aged twenty and over in "Bristol" - 13 men and 27 women - it is presumably recording those who worked within the central area, and as the 1861 trade directory lists four pipemaking businesses in this general area - G.E. Hunt at Phippen St, Temple Meads; William Mills at Temple St; R. Offer at East St, Bedminster; and J. Ring and Son at Temple Back - one may suppose these four businesses employed among them the 40 recorded employees. This gives an average of 10 employees per business, which agrees with the deductions from the 1851 figures discussed above and in the preceding section; Ring's were undoubtedly the largest of these businesses and possibly employed between 20 and 30 of the total, which would leave the others with ca.3-5 employees each, a figure which is again in agreement with the 1851 deductions.

The remaining pipemakers listed in the 1861 census - the 150 listed under "Clifton" - 44 men and 106 women - obviously enough must belong to the 14 other businesses listed in the 1861 directory, and all of these businesses with the exception of the firm of J. and J. White which was farther up the Frome at Baptist Mills, were in St Judes's; once again the average number of makers - ca.10-11 - agrees with previous evidence. Indeed, there is a suggestion here that in the bastion of the industry on the very eve of its final collapse, the average business was somewhat larger than those noted above in the central area of Bristol, for with the exception of George's, who were probably employing ca.30 workers, and White's who were primarily a pottery firm (pp550-3 above) but probably did employ more pipemakers than the average St Jude's family business, there is no evidence that any of these 14 businesses were larger than any other among them, so that discounting the presumed two largest employers, George's and White's, for the moment and supposing these two employed between them ca.45 workers, the remaining 12 businesses would still have averaged ca.8-9 workers each, double the figure suggested for the typical businesses in the central area of the city. All these calculations are, of course, somewhat speculative, but overall they do suggest that the typical Bristol pipemaking business in the middle of the C19 barely reached double figures in adult employees (i.e. those aged 20 and over), and that only two or three of the businesses were in any sense of the term formal firms.

Turning to the information on the ages of pipemaking employees, which is available for the years 1851, 1861, and 1871, some interesting points emerge. As noted above, these figures are in fact available only for Gloucestershire, but as the vast majority of Gloucestershire pipemakers - probably always 90% or more over the period under discussion - worked in Bristol, there is every reason to accept the county figures as representative of those for Bristol; and in the following paragraphs when the trends of the Bristol industry are discussed it is on this presumption.

Examining the 1851 figures first, it appears that at what is, both in terms of absolute numbers and numbers of businesses recorded in the trade directories (p.542 above), the zenith of the trade in the C19 and also almost the eve of its final collapse from 1860, the Bristol pipe industry is predominantly one of younger employees, 84 of the male employees - 77% - being between 10 and 39 years old and almost as large a proportion of the female employees - 120, or 75% - being in the same bracket. In the case of the male employees there is no one predominating age group, only a very consistent number in each five-year span within the range 10-39 years, but with the female employees there is a definite increase within the 10-39 year range to the 20-24 year period and an equally-definite decrease after that age; in both cases, however, there is a pronounced break between the numbers under 39 and those over.

It must be remembered, of course, that in a slum area such as St Jude's life expectancy would have been very much lower than in better areas. As noted in Section VIII below, mortality figures for St Jude's are not readily available, but Bristol as a whole had an average mortality rate of ca.3% in the 1840s which was third only to Liverpool and Manchester and the average ages at death for the labouring classes in Liverpool, Bethnal Green, and Manchester in 1842 were respectively 15, 16, and 17 years, well under half the averages for gentry there. The apparent youthfulness of those employed in the Bristol pipe industry at this time is thus in some degree misleading; but the impression still is that the trade in 1851 was not yet one of older employees serving out their declining years in the only trade they knew: in terms of the ages of its employees the industry still appears to have been relatively soundly based.

There are two peaks of older employees, both among the female labour: the earlier 50s age-group and the earlier 60s. It is difficult to know what, if anything, this indicates - possibly it represents widows forced to pick up employment following their husband's deaths.

By 1861, however, the breakdown of ages for pipemakers shows a very interesting change. Here, on the very eve of the dramatic and final collapse of the Bristol industry, the ages of the employees are seen to be definitely older than those indicated by the figures for ten years previously: in other words, the industry now has begun to show signs of attenuated recruiting of apprentices and to reflect older employees serving out their years; and this in turn agrees with the evidence noted above that the number of employees aged under 20 had dropped sharply between 1851 and 1861. As will be seen, this trend is confirmed by the 1871 figures.

The expanding of the five-year grouping in the 1851 abstracts to ten-year grouping, after the age of 24, in 1861 and 1871 is unfortunate, as it means that to obtain a comparable set of figures the under-24 five-year age groupings have to be joined to make ten-year groupings, with consequent lessening of sensitivity of the data, but the evidence is still accurate enough to show a trend towards older employees. In the following table the 1851, 1861, and 1871 figures, reduced to the same age groupings, are given, showing the progressively-increasing trend towards older workers.

Age	MALES			FEMALES		
	1851	1861	1871	1851	1861	1871
5-14 yrs	13	-	-	11	4	3
15-24 yrs	28	12	9	55	39	14
25-34 yrs	28	18	2	40	45	16
35-44 yrs	23	23	8	19	37	28
45-54 yrs	9	10	12	13	15	16
55-64 yrs	7	9	10	12	7	7
65-74 yrs	1	7	2	7	13	3
75 and over	-	2	2	3	-	1
TOTALS	109	81	45	160	160	88

These figures show that whereas in 1851 the age-groups with the highest number of male pipemaking employees were equally the 15-24 and 25-34 year-olds, each with 26% of the total number of employees, the age-group with the largest number of employees in 1861 was the 35-44 year-olds with 28% of the total and the age-group with the largest number in 1871 was the 45-54 year-olds with 17% of the total. Put another way, while 84% of male employees in 1851 were 44 years old or under, by 1861 only 65% were 44 years old or under, and by 1871 only 42% were. The one slight peculiarity among the figures seems to be the unusually high proportion of 15-24 year-olds in 1871 - 9, or 20%, evenly distributed between 5 aged between fifteen and nineteen and 4 between twenty and twenty-four - compared to the small number of employees aged between 25 and 34: this does suggest that either there had been a gap in recruiting apprentices but that recruiting had started again or else that with the collapse of the industry in the 1860s many of the younger men in their twenties and thirties had left to seek better employment elsewhere - the latter is perhaps more likely.

With women pipemakers the figures show essentially the same trend. In 1851 the age-group with the highest number of women pipemakers was the 15-24 year olds, with 34%; by 1861 it was the 25-34 year-olds, with 28%; and by 1871 it was the 34-44 year-olds, with 32%. The one minor pecularity among these figures is the unusually high number - 13, or 8% - in the 65-74 age-group for 1861, compared to half that number for the preceding ten-year group: there seems no obvious explanation for this occurrence, unless, as possibly with the peaks noted above for the earlier 50s and earlier 60s age-groups in the 1851 abstracts, it represents widows forced into employment following their husbands' deaths.

One particularly interesting aspect of the decline of the Bristol industry is revealed in a recent examination of the C19 Bath industry (Brown and Brown 1974). Out of 24 pipemakers appearing in trade directories or poll books, 6 of the 15 whose birthplace is known were born in Bristol. The first of these is first noted in 1841; all the others first appear between 1851 and 1871. Only 5 of the 24 makers are Bath natives, and three of these do not appear until 1878 and later (the widow and two sons of Joseph Sants, fl 1837-71, who was a native of Gloucester), which further emphasizes the outside, specifically Bristol, influence on the C19 Bath industry.

Those listed in directories or recorded in poll books were probably business owners - Joseph Sants, who was also in the pottery business, was recorded in the 1871 census as employing eight men, seven women, and four boys, presumably covering both businesses - but the Bristol influence on the Bath industry of this period is even more pronounced when those pipemakers known only from the census returns (1841-71), who were all probably journeymen, are studied. Here, out of 27 individuals listed (a number with family members also listed as pipemakers or pipetrimmers) 10 were natives of Bristol and one of the 5 whose birthplace is given only as "not Somerset" may also have been a Bristolian as the family name, Allen, is that of two C19 Bristol pipemakers who are almost certainly related to each other (there is a second Allen pipemaker listed in Bath, this time with Bristol as his place of birth). By contrast to the above figures, only three of those listed gave their place of birth as Bath (two others with the same family name, Pavey, gave their place of birth as Nantgarw, where as noted below (pp634, 640) the Bristol Pardoe family manufactured pottery and pipes, while two other Paveys gave Bristol as their birthplace and a fifth gave Tredegar, where pipes were certainly being made last century (see pp401-2), as her place of birth.

Of the various Bristol-born pipemakers listed either as probably business owners or probably journeymen a number have names of known Bristol pipemaking families of the C19: Allen, George, James, Moul, and Norman. However, none of those actually listed can be identified with individuals listed (i.e. as business owners) in Bristol, so it would seem likely that the individuals in Bath were children or younger brothers and sisters of those recorded in Bristol. The relationship among the five Paveys noted in the 1861 and 1871 censuses and referred to above - two men and two women noted in 1871 and a married man noted in 1861 - is unknown, but it is likely they were fairly closely related, and their variety of birthplaces suggest a journeyman family moving around the West Country and South Wales from one business to another, as is certainly known to have happened elsewhere in the later C19 and into the C20 (Hallgarth 1969: 3rd page; Triggs 1970: 117; cf pp395-6 above).

There is no doubt, therefore, that there was a considerable influx of Bristol-born pipemakers to Bath, the majority of them probably working there as journeymen and arriving in the 1850s and 1860s, just the period noted above as that when the Bristol industry reached its zenith and rapidly collapsed. As with the move of the Montreal pipemakers to Detroit as the Montreal industry started to decline (p.361 above), however, any relief found was only temporary: only three Bath makers, all members of the Sants family, were still in business by the 1890s, and only one of these businesses - that of Walter Sants, a son of the Joseph noted above - lasted into the C20, being last recorded at 27-29 Milk St in 1919.

Trade directory entries enable successive occupants of pipemaking premises to be traced; they also allow one to trace the movements of an individual pipemaker from one such premises to another. In this way some measure of the stability or otherwise of the industry in the particular centre being studied may be obtained, for as noted when discussing the Glasgow and Montreal pipemaking industries (4: IV and V) a high percentage of makers appearing for only a few years or a large number of address-changes for a business (as in Montreal) suggest an unstable industry.

By these standards, the Bristol industry appears relatively stable: something like Glasgow, perhaps, and certainly nothing like Montreal. The comparison with the Glasgow industry cannot be pushed too far, however, for as noted earlier a fair number of Bristol makers combined their work with other trades and this does not appear to have been the case with Glasgow makers to any marked degree, at least on the evidence available so far. Further, the Glasgow industry must have been far larger in its prime than ever the Bristol industry was. Unfortunately, definite figures are lacking, but in terms of staff McDougall's had 150 workers in 1914 when there were only 6 Glasgow firms compared to the 16 or 17 there had been at the height of the industry there, and probably ca.250-300 workers in the second half of last century when the Glasgow industry was at its height (McDougall figures in Walker and Walker 1969: 145); whereas George's, the leading Bristol firm of the time, are said to have had ca.30 employees in the early 1870s (Anonymous 1921a), after the final crash of the Bristol industry in the 1860s and in a position probably roughly comparable with that of McDougall's in 1914. As noted in Section V above, a manuscript note of the last Thomas George says the family firm had 32 workers in 1900.

Even at the height of the Bristol industry in the mid-C19 it is difficult to believe George's would have had more than ca.30 hands, and it seems unlikely that any other Bristol firm would have had any considerable number of makers unless possibly Ring's (who were not in St Jude's) when they were exporting to North America probably in the earlier C19; indeed, as noted above, the anonymous correspondent to the Examiner in 1850 (letter of 24 August) indicated that probably only between 100 and 200 people in St Jude's had partial employment in pipemaking about that time, even when sales were high, which they were not when he was writing. As there were ca.20 businesses listed in directories specifically in St Jude's at this period there can have been few big staffs even when trade was at its best. This impression, as discussed briefly in the preceding section, is reinforced by the census evidence. In 1841, when detailed breakdowns by employment first appear in the census abstracts, 226 men, women, and children of all ages were employed in the trade; in 1851 the figure was ca. 258; in 1861, ca.220; and in 1871, ca.123. Divided by the number of businesses recorded in the trade directories for these years - 19, 23, 18, and 7 respectively - these figures consistently indicate an average of ca.12 employees per business. Only one of the census abstracts, that for 1851, gives breakdowns of numbers of employees per Master, and unfortunately the returns are very incomplete, as the abstract-compilers admit; but for Gloucestershire (there are no figures specifically for Bristol) one master, who for reasons indicated below must have worked in Bristol, indicated he had between 30 and 34 employees, while another indicated he had 5 and three others indicated 3 each. As indicated below, the business with between 30 and 34 employees was probably either George's or Ring's; the others, which were probably family businesses - the proprietor, his wife, one or two of his children, and a journeyman - undoubtedly represent the size of the more typical Bristol pipemaking establishments of the period.

Mr George, in the manuscript note referred to above, said that John Carey, who worked "where the Old Market Street Wesleyan Chapel was Built on this site in the Year 1815...had between 80 & 90 People working for him,..." but this is an impossibly high number, particularly for that time, when the Bristol pipe industry was only just recovering from the catastrophic slump in the last quarter of the C18. What is interesting is that John Carey was indeed working at various times at Old Market St - 1794-95 and 1803 according to Matthews's directories - and apparently ceased working in 1815 or 1816 (though he was in Lamb St by this time). Mr George was born in 1872; in another note he again talks of the Chapel being built in 1815 on the site of Carey's works and says "My Fathers Great Grandfather ['great' has been inserted subsequently], helped Mr John Carey, when pressed for time to catch the Ships going to the West coast of Africa" (this note is dated September 1952). His father's grandfather was James George (B ca.1787, D 1873) recorded as a pipemaker 1822-58; his father's great-grandfather was the first Thomas George (B ca.1765-70, F 1812, D 1835) apparently initially working with a relative of his deceased father-in-law John Okely (F 1768, D ca.1799). Obviously there is a family tradition here, but it appears to have been distorted; 80 or 90 employees seems impossible even for the biggest firm at the height of the Bristol industry in the C19, and there are sound historical reasons for maintaining this number could never have been employed by John Carey. Certainly there could never have been a business this size in the C18. However, as is noted below, John Carey may well have been the leading Bristol pipemaker of his time, for there is evidence to suggest he had a flourishing business.

In Glasgow, however, White's - the other major producer there and McDougall's great rival - must have employed at least as many workers as did McDougall's in the second half of the last century; and Davidson's, the other major exporter of this period - and possibly A. Coghill's, if that firm was still exporting this late - cannot have been far behind in size. Murray's too, Davidson's predecessor, must have had a large staff. Thus several Glasgow firms must have been employing some 200 workers or more at the height of their prosperity, whereas no Bristol firm can ever have had as high as 50 employees. Indeed, in view of Glasgow's dominating the British export trade in pipes by the mid-C19 few firms anywhere are likely to have approached Glasgow's in size.

Unfortunately, even 100 years after Sketchley had published the first Bristol directory in 1775 and had numbered each property, earnestly desiring Bristolians to adopt this useful system[36] (it is said - Latimer 1893: 420 - that for 1s he attached numbers to doors), street numbers are still omitted from some entries. In the first half of the C19 in particular, such numbers are omitted from the great majority of entries, at least those for pipemakers; and because almost all pipemakers are confined to a handful of streets it is frequently impossible to know definitely when a property is changing hands. Add to this shortcomings in Matthews's entries - confusion between Gt Ann and Gt George Sts, for example - and renumberings of the streets in the St Jude's area at various dates, and the task is made even more difficult.

An example of this is the occupancy of the Lamb St property latterly number 14. This property can be convincingly traced backwards beyond 1848 - when its number first appears - because a whole series of pipemakers with the same surname as the maker listed at number 14 appear on Lamb St back to 1815, but this is more fortuitous than with most properties.[37] This property is of interest because it is the longest continuously-occupied pipemaking premises known in the city, being certainly occupied for 90 years. The ownerships, working backwards, are as follows:

1903-04: Holloway and Co
1901-02: Blackmore, Holloway and Co
1900: R.W. Blackmore
1892-99: Thomas John Corcoran
1891: not listed (Corcoran still at 22 New St)
1884-90: W. Pring
1882-83: Sarah Williams
1878-81: J. Sarah Williams [sic]
1877: Mrs J. Williams
1839-76: John Williams
1835-38: not listed
1829-34: Ann Williams
1825-28: John Williams
1824: Ann Williams
1822-23: John Williams
1815-21: Thomas Williams

The 1815 entry for Thomas Williams occurs in the "late entries" section, which may indicate Williams had only just set up business. In that year, and for the preceding years back to 1811, John Carey is listed as a pipemaker in Lamb St, but with no number given. Frustratingly, the copy of Matthews's directory for 1816 has four pages missing - apparently a printer's error - including the one where Carey's name would be; Carey does not appear in the 1817 or subsequent directories. Between 1810 and 1812 Nicholas Kennicott appears on Lamb St, and he certainly left Bristol at some time subsequently, for he is in Swansea by 1830. Again, however, no number is given, so whether Thomas Williams took over John Carey's premises remains unknown - it may even be that Carey took over Kennicott's premises if one assumes there was an error in the directory, an easy thing to assume with these Bristol directories. (In fact, the point could be resolved by examining the property deeds: the writer briefly examined those held by the Archives Office in Bristol for the St Jude's area, which latter has now been largely cleared and partly developed with multi-storey flats, and it appears there is a comprehensive collection. A study of the material was, however, not possible in the time available.)

The succession of occupants at 14 Lamb St seems typical of pipemaking premises elsewhere in the C19, for example in East London as noted in 4: VI. The Lamb St listings also have a fair share of the confusion and uncertainty typical of the evidence for pipemakers in Bristol in the C19 and attributable in part to confused directory entries, though the main outlines seem clear enough. From 1815 to 1883 the property is occupied by members of the Williams pipemaking family. Numerous Williamses pipemakers appear in Bristol, particularly in the C19, but their relationships are obscure (see Appendix IX). Thomas Williams II the founder of the Lamb St dynasty is presumably neither the Thomas Williams I fl 1791-92 in Redcross St nor the Thomas Williams III F 1830 having married the daughter of a freeman coalminer, though the latter is surely a relative as he votes from Lamb St in 1830, 1832, and 1835. The alternating John Williams and Ann Williams entries 1822-34 are probably directory compilers' shortcomings: presumably John (John Williams III) was a son of Thomas II, Ann was his wife who took over 1824, and the John Williams entries 1825-28 are errors. John Williams IV fl 1839-76 is presumably a third generation - the gap in the record 1835-38 may be no more than another directory error. In any event, this John Williams worked through the rise of the Bristol industry in the 1830s and 1840s, through its greatest period in the years on either side of 1850, and survived the collapse in the 1860s, presumably dying in 1876. His widow Sarah ran the family business for a further seven years.

Following her, the premises passes rapidly through a number of pipemakers, makers like those noted in East London desperate to find a living as the industry died and convinced they could make a go of it if they could obtain premises. The final occupants, Holloway and Co, also dealt in glass and china from their premises nearby at 45 West St and probably regarded pipemaking as a speculative (and unsuccessful) venture on the side.

Another pipemaking property which can be traced back through a number of occupants, though not nearly as far as the Lamb St property can be traced, is the premises latterly known as 22 New St. Working backwards, the occupants are as follows:

1890-91:	Thomas John Corcoran

1888-89: not listed
1886-87: Thomas Williams
1884-85: not listed
1882-83: Mrs George
1879-81: Thomas George (in addition to his premises at 36 Gt George St)
1886-78: Ann Lewis

In 1865 Ann Lewis is listed at 10 New St, and as there is some evidence to suggest that Wade St, Gt George St, and New St were renumbered about this time it seems likely 10 New St is the same as 22 New St. Assuming this, occupancy can be traced back farther:

1864-65: Ann Lewis
1854-63: George Lewis

Matthews's directories do not list George Lewis for the period 1851-53, but they list him (or presumably him) for the years 1847-50 at New St - no number. *Slater's (late Pigot's) Directory* for 1852-53 lists Lewis at New St (no number), but Scammell's *Gloucester, Bristol and South Wales Directory* for 1853 lists George Lewis at 7 Gt George St. Whether, therefore, Lewis was in reality at 10 New St for the whole period 1847-53 but simply omitted from Matthews's directories for the last three years is not clear. If he had been omitted from Matthews's directories by accident or inefficiency for the years 1851-53 then he is likely to have been at the same premises in New St for 1847-50 as in 1854 and onwards; if, however, he was indeed on Gt George St in 1853 there would be less reason to suppose he had been at *10* New St for the period 1847-50. A J.G. Reynolds disappears from New St in 1853 as Lewis re-appears in 1854, but Reynolds first appears in 1849 (on New St), in which year Lewis is also listed there. Other New St pipemakers could be at least approximately fitted into a sequence extending back from Lewis's first appearance in 1847 - Jonathan Moul 1846-47, James Tillett 1837 and 1840-45 (and 1847 after a one-year stay elsewhere), Edward Rich 1838-39 - but when the street number is not given, and when no listings of street occupants giving their relative positions are available, the task of identifying properties becomes impossible without resorting to a study of the property deeds.

Although this property has a much shorter definite association with pipemakers than the Lamb St property discussed above, it too has a final flurry of pipemaker-occupants as the industry dies. The Lewises, like the Williams family at Lamb St, occupy the premises for a consideable period - at least 24 years. When Ann Lewis retires or dies in 1878 the industry is largely finished, and as with the Lamb St premises after Sarah Williams died in 1883, several pipemakers take it over in the succeeding 13 years no doubt as a speculative venture. As the anonymous Bristol observer noted in the *Examiner* in 1850 (see above), as soon as a family could get enough money to set up a kiln and buy a mould and a little clay they would quite commonly set up in business for themselves. As was noted in 4: VI, citing the example of Wolverhampton nailmaking in 1819, the last resource of the starving journeyman was to set up as a master (quoted in E.P. Thompson 1963: 287, 1968 ed); and this must undoubtedly have applied to pipemakers in a similarly dying industry. Like the Birmingham gunsmith described in 1962, the Birmingham jeweller described in 1866, the blacksmith from the same Midlands area described in the later C17 all noted earlier (pp385-6 above), or the Wolverhampton nailmaker instanced above, a pipemaker could set up business with relative ease, for apart from a garret and a handful of tools and the clay the only fixture he needed was a kiln, and from the evidence of Flanagan of Leicester and elsewhere (2: VII) a maker could get by with a primitive kiln and no saggars (cf discussion on East London pipemakers, 4: VI). Pipemakers appear to have been entirely typical of the small independent craftsman.

The last owner, Thomas John Corcoran, is perhaps worth looking at in more detail. Unlike the Glasgow and Edinburgh industries, for example, where pipemaking slowly and quietly slips away, the last 25 years of the C19 in Bristol sees a number of short-lived enterprises setting up and attempting to succeed where others had failed. This, as with the rapid turnover of premises such as those at 14 Lamb St and 22 New St, reflects out-of-work pipemakers searching for an opportunity to re-establish their living.

Corcoran, however, is probably not one of these. He appears as landlord of the "Swan" in New St in 1887-90, and his decision to take over the possibly vacant premises of 22 New St (it is not listed in 1888 or 1889) must have been made with a good knowledge of local conditions - few people know the local economy as well as an innkeeper (cf p.721 below). Perhaps for this reason he is the only late C19 Bristol pipemaker who seems to have had some success. In 1892 he moved to 14 Lamb St and ran a detailed advertisement in Wright's directory for that year, listing Irish, straws, and meerschaum patterns at 1s6d a gross, assorted cutties at 1s0d a gross, and offering to stamp the customer's name and address on best-quality pipes at 2d a gross provided four or more gross were ordered - sample provided free. Such enterprise does not appear from other pipemakers, and Corcoran continues in business until 1899.[38] After a four-year gap in the Wright directory entries he appears at 136 York Rd, Temple Meads, for the single year 1904. What happens in the interval is not clear: in 1903 and 1904 the firm of "Corcoran and Co (A.J. Veale)" appears in Wright's directories at Tower St, Temple, to be succeeded there by the "Bristol Tobacco Pipes Manufacturers" until 1911, the second-last Bristol pipemaking concern; but the *Bristol and District Trades' Directories* for 1899, 1900, 1901, and 1902-03, but not that for 1903-04, continue to list Corcoran at 14 Lamb St. The *New Bristol Directory* for 1904 lists "Corcoran and Co" at Tower St, Temple, probably the "Corcoran and Co (A.J. Veale)" entry noted above. Possibly Veale bought out Corcoran's business and with it the firm's name, and then Corcoran himself started up again in York Rd; according to a niece contacted by this writer, Corcoran emigrated to North America.

An example of a business which did move premises a number of times but still apparently managed to thrive, is that of the three Careys - Israel II, John, and Israel III (or possibly four, if in fact there were two John Careys involved - this problem is discussed in Appendix IX). The Careys' business is listed as follows:

1775: Israel Carey, 38 Lewin's Mead
1783: Israel Carey and Son, Castle Green[39]
1785-87: Israel Carey, Castle Green

1791:	John Carey, Castle St
1792:	John Carey, Castle St
1794-95:	John Carey, Old Market St
1797-1801:	John Carey, Redcross St
1803:	John Carey, Old Market St
1805:	John Carey, Redcross St
1806-08:	John Carey, Redcross St and Coal Yard in Bread St
1809-10:	John Carey, Bread St
1811-15:	John Carey, Lamb St
1816:	relevant pages in directory missing
1817 and onwards:	no mention
1811:	Israel Carey, Bread St
1812:	Israel Carey, Ann [sic] St
1813-14:	Israel Carey, Pennywell Lane
1815:	Israel Carey, Gt George St - Counter, 4 River St, Ropewalk
1816:	relevant pages in directory missing
1817:	Israel Carey, Gt George St - Counter, 4 River St, Ropewalk
1818:	Israel Carey, Sugar House, Gt George St - Counter, 4 River St, Ropewalk
1819:	Israel Carey, Sugar House, Gt George's St
1820-21:	Isreal Carey, Gt George St (Counting House, Sugar House)
1822:	Israel Carey, Counting House, Sugar House, Gt George St
1823-26:	Israel Carey, New St
1827-29:	Israel Carey, Stoke's Croft
1830 and onwards:	no mention

These entries contain the usual quota of obscurities, particularly with regard to Israel Carey III. River St runs along the SE bank of the Frome and approximately parallel to Gt George St, and Carey may have had a property which ran from one street to the other; as noted above, the last Thomas George recalled an E. Carey making pipes sometime in the latter part of last century whose address - Blue Factory, Gt George St - when compared to the 10.56 ft to the mile 1883 OS plan of the area suggests he too may have owned property running between these two streets. Ropewalk was the name given sometime before 1883 to what is now the end of Wellington St at its junction with St Matthias Park, on the opposite side of the Frome from River St; the area had been a ropewalk in the C18 and was still open ground on Ashmead's 1828 plan. How the "Counter", "Counting House", and "Sugar House" fitted into this, and what precisely they were and what connection Carey had with them, is uncertain (see Section VIII below). However, Carey is noted 1809-14 as living in Broadmead (the west half of present Broadmead, between Union and Merchant Sts) and quite a distance from his business addresses for these years of Bread St, Gt Ann St, and Pennywell Lane, suggesting his business was prosperous enough for him to live in central Bristol and commute to the suburbs.

A similar but more pronounced situation occurs with Israel's father

John. Between 1810 and 1815 John Carey is recorded living at Hanham, miles away from his premises on Bread St (now Old Bread St, south of Old Market St) and Lamb St, and even today outside the Bristol city boundary. Carey must have commuted to work by horse or carriage unless he was an absentee proprietor, but in either case was obviously well enough off to afford a country house and run a city business. It is interesting to recall that the last Thomas George, in a manuscript note dated 1952 (see above) claimed his father's great-grandfather had assisted John Carey at the beginning of the C19 when he was producing for the West Africa trade and that Carey had "between 80 & 90 People working for him". For reasons already discussed, this work-force seems impossibly high for a Bristol pipemaking business at any time, but as indicated above John Carey may well have been the leading Bristol pipemaker of his day and have run a flourishing and relatively large concern; as noted in 6: VII(b)(3) the reference to trade with West Africa fits the known historical references at this time, and as the family had been pipemakers since Israel Carey II had taken his freedom in 1756 John Carey may have retained trade connections from earlier times.

As the Bristol industry draws to a close, the directory entries and census returns mirror the pattern of decline. The rapid changing of occupier of various pipemaking premises, the short-lived attempts of various individuals to establish themselves in the later C19, the lessening number of employees by 1861 and onwards and the increasing age of those who remained, and the movement of a number of journeymen and their families to Bath in the 1850s and 1860s have all been discussed. In 1880 Ring's advertise that they are also cigar merchants, and drop the "export" from their pipemaking references. In 1884 the firm of F. Korner and Co of Victoria St appears under pipemakers as an "importer of fancy goods", which must indicate the selling either of imported European clay pipes or of imported briers. The same year T. Lovett of Quay St, a victualler and landlord of the "Greyhound", advertised as agent for the famous clay pipes of Southorn and Co of Broseley, ironic in a city that for its size had once had the biggest clay pipe industry in the country. In 1899 Gibbs and Co of 33 Castle Street advertised themselves as "the largest importer of French pipes in the West of England". The Bristol clay pipe industry, in common with the industry almost everywhere else at least in England, had succumbed to the changing smoking habits of its erstwhile customers.

SECTION VII:
TRADE

(a) HOME (1) Introduction

The extent to which Bristol pipes were traded both at home and abroad is likely to be closely related to the fortunes of Bristol itself as a trading centre, and it is therefore necessary to consider Bristol trade in general before embarking on a survey of its pipe trade.

For the one thousand years of its existence Bristol has been primarily a port, so that shipping, whether coastal or foreign, has played a dominant part in its trade. Willan (1936b, 1964 ed and 1938, 1967 ed) has illustrated in detail that by far the greatest amount of local trade in the C17 and C18 was carried on by river and coastal shipping, for many towns well inland, such as York, Norwich, and Gloucester were ports of note. Trevelyan indeed has described river transport at this time as equivalent to modern railway transport (1942: 137, 1946 ed), and as Willan indicates (1936b: Maps I-III, 1964 ed, showing navigable rivers during the period 1600-1720s and the areas within 15 miles of these rivers), much of England was within reach of navigable waterways.

One reasonable C17 estimate on costs (quoted in Willan 1938: xiv-xv, 1967 ed) calculated that sea carriage was twenty times cheaper than wheeled carriage, and towards the middle of the same century Suffolk clothiers found that legislation designed to prevent fuller's earth being exported to The Netherlands was also preventing its being sent from Rochester - from where most of it was shipped - to Ipswich by sea and that they were paying £6 a ton for land carriage where they had paid 2s a ton for water carriage, an increase of sixty times (Unwin 1927: 287). Writing about the iron industry in the C18, one author notes it has been estimated that the cost of inland transportation for 20 miles was about equal to the cost of freight from the Baltic (quoted in Deane 1965: 105). In 1852, shortly before its decline, the Rainford tobacco-pipe industry took 50,000 tons of clay from SW England. The cost of the clay at source was 20s a ton, and to ship it by sea to Runcorn added another 8s-10s a ton. To bring the clay the last ca.14 miles from Runcorn to Rainford added another 10s or more and brought the final cost to 40s a ton (Berry 1963: 2-3). This phenomenon was not confined to England: Duhamel du Monceau in his account of pipemaking in northern France published in 1771 noted that a hogshead of clay from the Bray area ca.25 miles ENE of Rouen cost six to seven *livres* at source and that transport to Rouen added another seven or eight *livres* (Duhamel du Monceau 1771: 5).

The great advantage of water transport was that it took relatively bulky loads with ease - the coal trade, for example could never have existed without water transport, and stone, clay and agricultural products would have been difficult to move otherwise. A C17 estimate was that it would take 100 horses to carry what one boat of 30 tons burden would hold (Willan 1938: 190, 1967 ed). Further, by the C18 English roads were reputed to be the worst in Europe (P. Deane 1965: 70). In 1775 it paid the Horsehay Company to cart its pig-iron from Horsehay near Coalbrookdale in Shropshire to the Severn, ship it by trow some 100 miles to Bristol, and have an agent there ship it to Chester round the Welsh coast rather than send it the 50-60 miles by road to Chester (Ashton 1955: 71; cf remarks on atrocious roads in Staffordshire as late as the 1760s quoted in J. Thomas 1971: 74-5). In the earlier C18 the roads from Bristol north into the Vale of Berkeley and south into the Somerset flats were impassable at certain times of the year (Latimer 1893: 140-1, 170; Minchinton 1954: 72; Marcy 1969: 155-6), as was the road to Bath - the improvement of the Avon in 1727 to permit navigation to reach Bath from Bristol, only 11 miles away (see below), must be seen in the light of the difficulties travellers between Bristol and Bath encountered in the 1720s, 1730s, and 1740s (Latimer 1893: 170, 212, 214, 270). In 1765 it still took ten hrs to travel the ca.40 miles from Bristol to Gloucester (Latimer 376). As late as 1796 one traveller wrote

> the road is very bad. The ruts intolerable and indeed this may be said of all the country beyond Oxford and generally thro Gloucester (quoted in Woolrich 1974: 179).

Latimer (1887: 243), talking of the annual Bristol fairs held in Temple St and St James's Churchyard until abolished by the Council in 1838, gives some indication of the widespread extent of Bristol's contacts.[40] In 1636 the mayor of Penzance wrote the government that 12 Turkish ships lay in St George's Channel (between Wales and Ireland) to capture travellers going to Bristol fair, and the same year it was noted that goods manufactured in parts of London where plague was prevalent were destined for Bristol fair. In 1657 travellers from Tenby and Milford in SW Wales were escorted to Bristol for the fair by a naval vessel and ten years later two frigates had been used to clear the Bristol Channel of French ships which it was said "would have done mischief at Bristol fair". Arrowsmith's Directory (1906 ed: 187) indeed describes the St James's fair as probably the largest of its kind in the C17.

Nevertheless, land transport does appear to have played an appreciable part in Bristol's economy, and was doing so even before the mid-C16 to judge from references to carriers going to Wells and the Somerset villages, to Cirencester, and as far away as Oxford, Reading, and London in the recently-published ledger for 1538-50 of the Bristol merchant John Smythe (Angus and Vanes (eds) 1975: 11 and refs). Minchinton (1954: 73; 1962: 5-6) and Latimer (1893: 288) quote several contemporary sources which indicate widespread road connections from Bristol in the C18: Defoe (quoted in Marcy 1966: 2), talking of the early years of the century, notes carriers operated from Bristol as far as Southampton to the SE and the Trent to the NE; by 1750 there were 94 carriers plying as far as Leeds, Nottingham, and other centres, and by the end of the century links were even more extensive. It is estimated that in the 1760s 150 pack horses and two waggons went to Bristol from Manchester every week with goods for export (quoted in Marcy 1969: 158). The 1801 Matthews's directory listed coaches going as far as Exeter, Weymouth, Portsmouth, London, Oxford, Birmingham, and Milford [Haven]; while waggons went to scores of places in the South-West and south-central England and across the Midlands to places as far away as Lincoln, Yorkshire, and Liverpool. Bristol fairs at the beginning of the C19 attracted merchandise from much of England and also from Ulster; Yorkshire, Lancashire, Staffordshire, Warwickshire, Buckinghamshire, London, and Devon all being listed among other areas (Latimer 1887: 243; cf Anonymous 1906 ed: 187).

Turnpiking of roads in the Bristol area had started in 1727, though a report of 1749 indicates the roads were in as bad a condition then as they had been before turnpiking, and it was not until the second half of the century that the violent opposition to turnpikes which took the form of repeated wrecking of the turnpike gates ceased (Marcy 1969: 156-7). Following this, however, turnpiking was extended and contributed to improved roads in the second half of the century, Bristol having by the 1820s the largest Turnpike Trust in the country, with some 180 miles of road (Buchanan and Cossons 1969: 177-8). In 1754, despite some sarcastic remarks on the Bristol-London road being the worst in Europe considering the money put into it, it was possible to travel the ca.115 miles between these cities in two days (Latimer 1893: 313, 309); seven years earlier it had taken six days (Latimer 1893: 268-9). Three hrs is recorded for the Bath-Bristol trip in 1758 and 2-1/2 hrs in 1794 (Latimer 333, 513), which is not so very much slower than the present rush-hour time by public transport for the journey. In 1775 the Bristol-London journey could be done in 16 hrs (Latimer 418). An Exeter coach was started in 1764, one to Birmingham in 1765, and one to Leicester in 1772, the last meeting the London to Liverpool and Lancaster coaches - themselves only introduced in 1760 - at Coventry and thus considerably extending travel facilities from Bristol (Latimer 367, 400, 309). In 1783 a critic of the postal system noted that a letter despatched with the fast Monday coach from Bristol would be delivered in London on Tuesday morning whereas mail took two days by post-boy (Latimer 458), though the latter time cannot be compared unfavourably with that offered by the postal service of today.

These times, however, were for stage-coach or "flying-machine"; the stage-waggon, which took the freight and the poorer passengers, was much slower. In 1747 London freight was taken to Newbury by waggon and thence by barge, the journey being accomplished "commonly in 12 or 14 days"; by 1758, however, it was taking but five days, and in 1777 the journey could be made in two days (Latimer 268-9, 430). The 5 mph achieved for freight on the London-Birmingham route was considered an optimum, and freight from Manchester to Leeds and Manchester to Sheffield - both distances of 45 miles - took 24 and 40 hrs respectively at the end of the C18. Even as late as 1829 freight between Carlisle and Newcastle upon Tyne averaged only 19-20 miles a day (P. Deane 1965: 72-3). Further, road carriage rates were increasing in the last years of the C18. Turnpike tolls made transport costs to Bristol or Bath of coal from the nearby Somerset coalfields more than the pithead price of the cheaper grades of coal (noted in K. Hudson 1965: 41-2, 97, 1968 ed); in 1805 it cost 8s6d to send a case of files from Warrington to Coventry - a distance of ca.100 miles - by road, as against 2s6d by canal, and the latter transportation was just as fast (Ashton 1939: 96, 97).

The advent of the railway put land transport in a decisively permanent position of superiority over water transport. In Bristol, however, perhaps because harbour facilities were inadequate for much of the century (discussed in Sub-section (b) below), rail connections were not so early nor so important as they were in the industrial north. It is no coincidence that the railway was first developed on a major scale in the north, where time saved had become money saved: the Liverpool and Manchester Railway had been completed in 1829 (Ashton 1948: 87). The Bristol-London line was opened in 1841 (Bath had been reached in 1840) and was in fact the second major intercity line - the Birmingham-London line had been opened in 1838 - but railway connections from Bristol to the Midlands, much of whose trade Bristol had handled until the completion of the Grand Trunk Canal in 1777 had made it much cheaper to ship through Liverpool (see below), were not completed until 1844, and even then the Bristol-Gloucester line, originally designed to be of the same gauge as that from Birmingham to Gloucester, was constructed to the 7-ft gauge and not converted until 1854, goods having to be trans-shipped at Gloucester. The Bristol-Exeter line was completed in 1844, sections being opened progressively from 1841, and in 1848 connections to Plymouth were completed; but connections with South Wales, with which Bristol had had strong economic ties in the C18 (Minchinton 1954: 84), were not effected until 1863, and then the Severn had to be crossed by ferry. Only in 1886, when the Severn Tunnel was finished, did Bristol have direct links with South Wales.

That earlier rail connections with its former Midlands hinterland would have benefitted Bristol is suggested by the growth of Gloucester, described in 1780 as having its former manufactures supplanted by Bristol (quoted in Minchinton 1954: 78), in the C19. The Gloucester and Berkley Ship Canal, finally opened in 1827, made navigation to and from the Bristol Channel easier and with the opening of the Birmingham-Gloucester railway in 1840 the port enjoyed a prosperity great enough to warrant the replacement of the tramroad from the railway to the docks by a direct rail connection in 1862 (K. Hudson 1965: 56, 1968 ed); and improvement of the locks to the Ship Canal 12 years later to allow passage of ships up to 1,200 tons, double the tonnage previously permitted (Buchanan and Cossons 1969: 194-6). Further, the Severn rail bridge, opened in 1879 and the first direct rail connection across the Severn into the Forest of Dean coal area, was designed not as a link to Bristol but as one to Gloucester (Buchanan and Cossons 1969: 218 and 220).

The normal method of selling pipes appears to have been to peddle them round the countryside (cf Ashton 1955: 69, 1961 ed) - as noted earlier (p.150 above), Flanagan of Leicester, Rand and Jennings of Colchester, and Manning of Boston used this method of selling their pipes into this century, and in Glasgow pipe-hawkers used to make weekly rounds, public houses being the most frequent bulk-buyers as pipes were distributed very cheaply or free by publicans to customers. Writing in the middle of the C18, R. Campbell (1747: 326-7, 1969 ed) noted that "Fourteen or Fifteen is Time enough to bind a Lad [as apprentice], because tho' the Pipe-Making is not immoderately laborious, yet their Strength is tried in carrying Pipes to the publick Houses in the City and Suburbs," indicating that peddling pipes was the standard method of selling them at that time and that taverns were the regular buyers; and earlier than this, in an advertisement in the Stamford Mercury of 5 August 1731, Robert Collington, a Stamford Alderman setting up a pipemaking business, announced that "all Traders and Chapmen may be furnished at reasonable rates" (P.K. Wells files), indicating he expected a market both among shopkeepers and hawkers. Mayhew and Fairholt, writing over a century later, indicate that peddling pipes was common in the middle of the last century, though in their examples it was not the maker or his family or assistants who peddled the pipes but professional hawkers. These hawkers, Fairholt notes (1859: 178-9; cf M. Phillips 1918: 166), had their own "pipewalks" round publicans and tobacconists whom they supplied over the years: from this it seems likely that many pipemakers had no direct say in who retailed their pipes, leaving the hawkers to establish which publicans and tobacconists sold their products. (According to Robinson and Spence (1937: 208), among the new by-laws of the London pipemakers' guild dated 23 January 1805 was one forbidding members to hawk their pipes or to have them hawked, a 10s fine for the first offence, 20s for the second, and 40s for the third. Presumably the reason for this was to keep the retail price low in order to encourage more buying, and to check the sale of substandard pipes to hawkers by makers not members of the guild, but the force of this law was clearly dead by the 1850s - the guild itself became extinct in 1868 or 1869, as noted in 3: I). Coolen (1970: 400 n.12) noted that in the middle of last century there was a pipe factory at Fruges in the Pas-de-Calais which in particular turned out a small pipe which was sold in Brittany by hawkers.

In the early 1780s John Frederick Bryant jr of Bristol, trying to make a living in the hard days in Bristol when the pipe trade with the American colonies had ceased, made two rounds a week with a hamper of pipes, frequently covering 20 miles a trip; his wife supplied city customers (Bryant 1787: xxv). In 1714 Charles Wharton of Beverley Parks, Yorkshire, bought Nottingham pipes - probably the ornate style made there (see 1: II and 5: I) - at Gainsborough (Sheppard 1902: 5, 1912 ed), a point some 37 miles from Nottingham and some 45 miles from Beverley. It is possible that Wharton obtained his pipes from Gainsborough because that was the nearest centre to Beverley which sold Nottingham pipes: if so, it suggests that Nottingham makers peddled, or had peddled, their products up to 30-40 miles from Nottingham (though in view of their ornate style they may have been sold over a wider area than ordinary pipes). Gainsborough in the C17 and C18 was developing as a small river port, trans-shipping cargoes from seagoing vessels, particularly from London, to river craft (Beckwith 1967: *passim*; N.R. Wright 1970: 5): it may thus have become a convenient marketing centre for small traders such as pipemakers.

Work by Peter Wells on Lincolnshire pipemakers (paper by P.K. Wells at the Spring Conference of the Society for Post-Medieval Archaeology, Lincoln, March 1969) suggests a radius of ca.17 miles round Boston for finds of C19 pipes made there and one of ca.12 miles round Spalding for pipes made there by Isasc Bilby in the early C18. The distribution of C19 Boston pipes is particularly interesting because a recent study of the development of Boston has shown a "market radius" based on market-day links by carrier and sailing packets mentioned in White's 1826 directory which coincides exactly with the distribution of pipes for the recently-excavated Boston kiln of the Manning family. The area extends to Wainfleet in the north and Long Sutton in the south, both ca.15 miles from Boston (P.K. Wells *in litt.* 17 April 1969, see now P.K. Wells 1970: 24; I am very grateful to Peter Wells for much information and discussion on his as-yet only partially published research).

Gant (*in litt.* 16 April 1968) has found people round Colchester appear to have literally ditched their used pipes, for Colchester-made pipes have turned up in farm ditches up to ten miles from the city centre, again suggesting a market radius of about that distance.

The firm of Turpin and Sons of Macclesfield in Cheshire founded in 1840 used to make three-day trips three or four times a year in a high open box-cart, their rounds covering large areas of Cheshire, Derbyshire, and Staffordshire, suggesting a considerable trading area. Latterly they may have been helped by the declining number of makers in business - they had in fact taken over a firm at Newcastle-under-Lyme in Staffordshire in 1907 and another in Northwich in Cheshire in 1913. The firm continued in production until 1927, and was still selling accumulated stock in 1942 (G.C. Spence 1942: 56-7).

Seventeenth-century evidence suggests that given good roads villagers living as far away as 15 miles from Preston made regular use of that town's facilities and that there was contact from as far away as 20 miles. Evidence for Lichfield too suggested an approximate radius of contact of ca.15 miles - a major factor naturally was the limit of a day's return journey wither by horse or foot (H.B. Rodgers 1970: 110-2 and 112 n.1). Talking of the Staffordshire pottery industry towards the end of the C17, when it had not yet reached the factory stage (cf p.548 above), Plot (1686: 124) noted that the pots were sold "cheifly to the poor *Cratemen*, who carry them at their *backs* all over the *Countrey*, to whom they reckon them by the piece,...." There follows a description of the complex system whereby the amount of hollow ware (pots, jugs, etc) and flat ware (plates, etc) was calculated for the various sizes of the items, clearly indicating this method of retailing to be well established. Before the C18 the "Countrey" was probably restricted to Staffordshire - a "Burslemware" carrier is recorded dying at Wednesbury in south Staffordshire in 1703 - but Staffordshire ware is known in small quantities from places on natural routes out of the country - Chester, Kidderminster, Worcester, and Bristol (Weatherill 1971: 76-80). Among miscellaneous equipment noted in potters' probate inventories for The Potteries during the period 1662-1761 were pack-saddles (Weatherill 1970: 7), suggesting the potters themselves also made rounds, though no doubt only local. By the 1730s there was a steadily-increasing river trade down the Weaver and thence to coastal and oversea distribution (Weatherill 1971: 80-95); but in view of Wedgwood's noting at one time in the earlier C18

> Only one horse and one mule left in Hanley. No carts scarcely in the country. Coal carried on men's backs

(quoted in J. Thomas 1971: 6, cf 105) and the atrocious state of Staffordshire roads almost a century after Plot was writing (quoted in J. Thomas *op. cit.* 74; cf Moisley 1952: 153-4; Rowlands 1968: 52, 54, 57; Weatherill 1971: 95) - Shaw noted that chapmen kept gangs of horses and that flint used in white saltglazed stoneware production was carried either by horse or by men (S. Shaw 1829: 169, 1970 ed) - it is clear that the Staffordshire ceramics industry could never have developed as it did without the improved modes of transport available from the later C18 onwards (cf J. Thomas chapts 7-9; Moisley 1952: 154-5, 156 fig 4; Weatherill 1971: 80-95). It was not until 1760 that an act of parliament was passed for repairing

Staffordshire roads and opening new ones there, and initially it was opposed by the populace who "rushed en masse into open disturbance" because they feared an improved road system would lead to their livelyhood either being "wholly destroyed, or taken out of the country" (S. Shaw loc. cit.). However, though coal was carried on these roads at specially reduced rates, clay and flint were not, and the transport of ceramics by horse or waggon has some obvious disadvantages, so that it was the introduction of the Grand Trunk (subsequently called the Trent and Mersey) Canal built 1766-77 which made a decisive improvement to communications for The Potteries, tonnage transported on the canals increasing until ca.1870 (Beaver 1964: 10 and 12, 15-17).

In the case of Bristol its Turnpike Act of 1726-27 provided for a dozen turnpiked sections of road radiating from the city up to ca.15 miles and joining turnpiked sections of other trusts, for example that at Bath, where turnpiking had begun with an act of 1706-07 (Buchanan and Cossons 1969: 177-8). However, traffic by wheeled vehicle between Bristol and most of its surrounding villages remained almost unknown into the second half of the C18 - ca.1760 not more than four carts a year went from Clevedon to Bristol, almost everything being carried by pack-horse (Latimer 1893: 325), and well into the 1820s pack-ass trains were still being used in addition to waggons and carts to transport coal from the north Somerset coalfields (Bluhm 1971: 55). In the late C18 H.O. Wills I, the founder of the Bristol tobacco-firm, travelled around the city collecting orders which were later delivered by horse and cart; in the last decade of the century the firm extended its trade into Somerset, Wiltshire, Devon, and Cornwall, Wills himself travelling on horseback, or where possible by horse and dog cart, to surrounding market towns and villages with samples of tobacco and snuff. This proved so successful that the firm hired two, or possibly three, full-time travellers, whose orders were then dispatched from Bristol by local carriers, barges, or coastal vessels, though not, apparently, without many headaches to the firm caused by unsatisfactory transport (Alford 1973: 26-7). Wilcox indeed has indicated roads in the Bath area were deteriorating in the later C18 because of increasing heavy traffic, one brewery of the period increasingly using water transport in the 1780s and 1790s to transport their beer to Bristol (Wilcox 1971: 28).

Among the items listed in the probate inventory dated 1727 of the Arundel pipemaker William Artwell (G.H. Kenyon 1958: 106 and Atkinson 1972e: 39) was a horse and bridle and "a pair of hampers on a packsaddle," which clearly indicates Artwell went on his pipe-rounds by horseback. Artwell's pipes have been found at Shoreham, Lewes, Horsham, and Chichester - at which last he was married in 1693 though there is no evidence he actually worked there (G.H. Kenyon loc. cit.; Atkinson 1967: 315 and 1970b: 161 n.1) - indicating trade to points from 10 to 25 miles from Arundel. The inventories of the goods of two deceased Lincolnshire pipemakers, John Fox and Isaac Bilby, both of Spalding, and of a deceased Cornish pipemaker, Nicholas Hambly of Truro, give similar indications: the Fox inventory (P.K. Wells files), dated 1671, includes a mare and a gelding, a "pr of homprey" (hampers?), a "pr of pedds" (peds - wicker hampers, or hampers with a lid (OED); usually slung in pairs over a horse's back (G.E. Evans 1960:

213, 1967 ed)), a "panell" (panel - type of saddle), and a pack-saddle; the Hambly inventory, dated 1690, includes "one horse and a pack saddle" which were together valued at £1 10s (Douch 1971: 150, cf 147); while the Bilby inventory, dated 1728, includes a mare, bridle, and hamper valued together at £4, a gelding valued at 15s, and "pannell & hampers" worth 3s (P.K. Wells files; cf P.K. Wells 1972: 14). A third deceased Lincolnshire pipemaker's inventory, that of Matthew Heblethwight of Lincoln and dated 1729/30, does not mention any saddles or hampers, but a horse valued at £1 10s and an "old mare", rather surprisingly valued higher, at £2 10s, are noted, again suggesting transport was by horse (P.K. Wells files). The rather detailed inventory of the effects of a deceased Norfolk pipemaker, William Case of Downham Market, prepared in 1691/2, lists a mare - valued at £4 - a saddle, bridle, and "small cuirie(?) carte", this last valued at 15s (Oswald in litt. 11 October 1972), suggesting Case, who appears to have been fairly well off (cf pp443-4), may have used a horse and trap to sell his products. As noted in Section III above, the Bristol apprentice-roll entry for John Sinderling sr in 1653 indicated he was to receive inter alia at the end of his term £3 or a mule worth that amount, suggesting Bristol makers traded their pipes the same way Artwell did. Much later, as will be shown, there is evidence that Bristol shipped pipes to centres in the South-West distant enough that they must have gone by rail (Section VII(a)(2) below).[41]

Water transport was slow, but no more slow than road freight, to judge by the figures given earlier, though obviously it depended on whether goods were going upstream or down - in 1809 it took 3-1/2 days to travel from Oxford to London by the Thames and 6 days to make the return journey (Willan 1936b: 102 n.5, 1964 ed). By the C18 canal traffic could average 2-1/2 mph, which as Willan says (1936b: 102, 1964 ed) compared favourably with other forms of goods carriage until railways arrived. However, if roads could be adversely affected by weather so could canals: frost, flood, and drought all could hold up traffic. In some trades speed of transport could be more important at times than cost - for example in the tobacco trade, where leaf had to be transported quickly from port of landing to factory. Shipping tobacco from Liverpool to Bristol by canal even involved knowing the tides in the Severn, otherwise leaf could be held up for 12-14 days (for examples of these and other problems with canal transport encountered by Wills of Bristol in the early C19 see Alford 1973: 42-4).

As for costs, however, it was calculated in 1766, the year the Grand Trunk (or Trent and Mersey) Canal was started, that canal transport cost 2s6d a ton for ten miles while land carriage for the same distance was 8s6d a ton (Warillow 1960: 91). Other figures show that canal transportation was consistently a half to a quarter the cost of road transport at the end of the C18 (Ashton 1955: 89, 1961 ed), and the Warrington-Coventry costs noted above indicate the same comparisons for 1805.

In 1835-36, on the eve of the railways, the Grand Trunk Canal took 185,000 tons of material and merchandise to and from Stoke-on-Trent: ca.144,000 tons were imports and of that ca.70,000 tons were clay and stone from Cornwall and Dorset. About 1870, when canal traffic was at its height, 138,000 tons of potters' materials were being imported annually with 65,000 tons of finished pottery being exported; in addition, 207,000 tons of iron ore and 357,000 tons of coal were being transported, either locally or out of the district. In 1937, 107,000 tons of potters' materials came by water, and though by 1952 the figure had dropped to 25,000 tons, kaolin in 1960 could be brought from the south coast of Cornwall to The Potteries in only four or five days by sea and canal, and this was still the cheapest means of bringing the clay (Warillow 1960: 94; Beaver 1964: 15,16).

Small loads and material for places not near waterways would undoubtedly have had to go by land, or else - and this may have been the case in many places - many people would have had to forego certain non-essentials. From Willan's remarks on coastal trade, the glassmaking and ironware trades in Bristol seem to have been of major importance (Willan 1938: passim, 1967 ed), and glass and iron items may have been the type of essentials - with a high value-to-weight ratio and the product of specialist craftsmen - which would be sent by land to places away from a water route. Willan also notes the Barnstaple and Bideford were important C18 ports for importing tobacco - indeed the latter was importing more tobacco in the C18 than any port save London - but both seem to have distributed the tobacco largely, if not wholly at times, by land (Willan 1938: 168 and refs, 1967 ed). Hamilton (1926: 129, 1967 ed) has suggested that the growth in the second half of the C17 of small manufactured specialties in Birmingham - the "toy" industry - was partly a result of Birmingham's poor transport facilities inhibiting the production of heavy goods.

The Bristol Channel and Severn basin in particular formed a Bristol-dominated area, and one already flourishing before the mid-C16 as the 1538-50 ledger of the Bristol merchant John Smythe shows, with its references to Bewdley, Tewkesbury, and Bridgwater trowmen shipping goods as far north as the Worcestershire ports for overland transport to the Midlands, south to Minehead, and west to South Wales (Angus and Vanes (eds) 1975: 11). The Severn, while not a trouble-free river, was the only major English river navigable without aids such as locks, flashes, and weirs (Willan 1937b: 69). By the C17 it was navigable as far as Shrewsbury, some 130 miles from Bristol, and in the C18 navigation was extended to Welshpool, some 25 miles farther (Willan 1937b: 69) and Bristolians were involved with the early iron industry at Ironbridge, 15 miles below Shrewsbury (Minchinton 1954: 84). Defoe, writing in the first quarter of the C18, noted that "by the Navigation of two great Rivers, the Wye and the Severn, They [Bristol merchants] have the whole Trade of South Wales, as it were, to themselves, and the greatest Part of North Wales" (quoted in Marcy 1966: 2). "Not only all South Wales is supplied from Bristol with every article of foreign commerce," wrote an observer in 1784, "but likewise the cities and towns of the Severn", and ten years previously another writer had observed that "If we consider Domestic Trade or inland Navigation. Bristol is without rival" (both quoted in Minchinton 1954: 79). Bristol trade with "nearly the whole of North and South Wales" was noted again as late as 1799 (quoted in Marcy 1966: 6). About 1780, John Frederick Bryant jr twice went to Carmarthen, "that place taking off great quantities of Bristol goods", in attempts to establish a market there for his pipes, though he was unsuccessful in this, getting "many promises of support" but nothing coming from them (Bryant 1787: xxiv-xxv).

The Stour gave access towards The Potteries and Birmingham and the Salwarpe to the Droitwich saltpans, although the improvements allowing navigation beyond Stourbridge in the later C17 were apparently not long-lasting (Willan 1937b: 71). Only the Bridgewater-Brindley canals in the second half of the C18 put Liverpool in a decisively favourable position for the north Midlands trade (Little 1954: 136, 1967 ed; cf Marcy 1969: 170-1), for Midlands trade had come through Bristol since medieval times, for example Coventry alabasters and cloths for Iberia (Carus Wilson 1933b: 186-91; MacInnes 1939: 30-1; Little 1954: 78, 1967 ed; Sherborne 1965: 14-15). Plot (1686: 121-2) noted that the highly-esteemed Stourbridge clay used for glass-foundry crucibles was sent by land to Bewdley then shipped down the Severn to Bristol and thence to London. Imports, such as the Swedish iron used by the Birmingham and south Staffordshire industries, came via Bristol and the Severn (Allen 1929: 15, 1966 ed; Little 1954: 157, 1967 ed). As late as 1766, the year the Bridgewater-Brindley Grand Trunk Canal was started, three waggon-loads of Burslem pottery, totalling eight tons, were sent every week to Bewdley to be shipped to Bristol for export, ten tons of clay and other goods being taken back to Burslem (Warillow 1960: 80); but the completion of the canal 11 years later made the exporting of Staffordshire pottery through Liverpool vastly cheaper (I. Noël Hume 1969b: 22; cf 1972b: 230). Even as late as 1788, if John Aikin's *England Dilineated* published in that year is accurate, Bristol had not wholly lost the Midlands export trade, for Aikin noted that Droitwich salt; woollens, stockings, and hardware from Birmingham and Wolverhampton; and earthenware from Staffordshire still went through Bristol, though "Liverpool has gained upon Bristol, chiefly on account of the superiority of the canal navigation to that town, above the difficult and uncertain navigation of the Severn" (quoted in Marcy 1966: 3). In 1794 Matthews's directory lists Severn trows going as far north as Bridgnorth and others connecting with various other shipping routes at Stroud, Gloucester, Tewkesbury, Worcester, and Bewdley. The remnants of Severn trade did indeed continue for almost a century and a half after this, for Severn trows continued to ply regularly to Bristol and other estuary ports until the 1930s (Buchanan and Cossons 1969: 176).

The Bristol Avon was less useful, for it was not until 1727 that it was made navigable as far as Bath only some 11 miles upstream (Willan 1936a), but the Warwickshire Avon was navigable to within four miles of Warwick - some 50 miles above its confluence with the Severn at Tewkesbury - by 1641 (Willan 1937b: 70). Among the rivers which flowed into the Bristol Channel, the Parret, originally navigable to Bridgwater, was improved upstream until Taunton was accessible by its tributary the Tone in 1717 (Willan 1937b: 73-4). In the second half of the C17 the Wye allowed navigation as far as Hereford - far beyond Llandogo which K. Hudson (1965: 119, 1968 ed) mentions as a high-point in the river trade but which is only the approximate head of the tidal stretch (One-Inch OS map 7th ser. sheet 155) - and later the Lugg was improved to extend navigation as far as Leominster. Although the whole Wye navigation caused much difficulty it was used both for trade between towns on its system and for trade with the Severn (Willan 1937b: 74-7) - Matthews's first Bristol trade directory of 1794 lists regular Wye trows operating as far as Hereford.

Probably largely because of the widespread river connections, but also no doubt because there were never sufficient concentrations of industry in suitable areas and therefore never the financial resources, there was never any major canal-building within the Bristol hinterland, and those canals which did connect with the Severn basin tended to draw away trade from Bristol rather then take it there. The south Midlands had been linked by canal to the Severn in 1769 and again in 1772 (Ashton 1948: 82-3; 1955: 88, 1961 ed), but as already noted the completion of Grand Trunk Canal in 1777 opened the way to Liverpool and trade hitherto coming south to Bristol went north to Liverpoorl and trade hitherto coming south to Bristol went north to Liverpool. Similarly, the linking of the Severn basin with Kingston upon Hull by canal in 1772 gave Midlands goods access to an east-coast port which by 1800 ranked third among the outports (Ashton 1955: 89, 1961 ed). The Thames and Severn Canal, opened in 1789 and giving direct access to London, passed well to the north of Bristol and concentrated mainly on shipping Forest of Dean coal and Midlands merchandise, entirely bypassing Bristol. The Kennet and Avon Canal linking Bristol directly with London was not completed until 1810 (Buchanan and Cossons 1969: 186-7).

The "metropolis of the West" concept illustrated by Minchinton (1954) emphasizes the widespread nature of Bristol contacts already noted by Willan (1936b: *passim*, 1967 ed and 1938 *passim*, 1967 ed) in his studies of coastal and river trade (cf McGrath (ed) 1955: xviii, 1968 ed). As a large population centre Bristol needed much food produce: Bridgwater sent peas, beans, and wheat; corn came down the Severn and Warwickshire Avon; Cheshire cheese and salt came down the Severn; cider down the Wye; butter and cattle from South Wales; cattle also from Somerset. As an industrial centre Bristol took Pembrokeshire and Carmarthenshire wool for its cloth industry; the Bristol delft industry according to a Swedish observer in 1767 (quoted in Charleston 1963: 327) was using great quantities of wood from Wales, pipeclay was being shipped from Poole and Bideford. In return Bristol shipped iron, lead, nails, leather, soap, sugar, candles, salt, grocery wares, cloth, wool, butter, tobacco, wine, beer, earthenware, mercury, haberdashery, coal, tin, hops, hemp, tar, pitch, glass bottles, oranges, and lemons in the C17 (Willan 1938: 172, 173, 1967 ed).

The Poole trade indicates that Bristol contacts extended round Land's End - pipeclay shipped from Exeter must have been either Poole or South Devon clay being reshipped - and other evidence indicates considerable trade not only with Exeter but as far as London along the south coast: Bristol earthenware was sent to Gloucester, South Wales, to the South-West and as far as Southampton. (Willan's studies indicate that Poole had a virtual monopoly in the pipeclay trade, shipping at least as far north as Hull on the east coast and Chester on the west. Further, certainly Hull and East Anglian ports reshipped the clay inland by river, and clay was reshipped from Hull along the coast to Bridlington. Bideford pipeclay, however, was also shipped at least as far north as Chester, including to Bristol.) Matthews's directory of 1794 notes market boats to Chepstow, Newport, and Caerleon and ships sailing to 32 ports in Wales and the South-West from Chester to Poole as well as places as far distant as Greenock, Lancaster, and London.

Bristol investment in the C18 centred mainly, as is noted below, in South Wales, but Bristolians had interests in tin mines in Cornwall, lead mines in Cardiganshire, slate quarries in North Wales, and were closely connected with the birth of the industrial revolution at Coalbrookdale in

Shropshire, on the upper Severn (Minchinton 1954: 84).

With all this as a background, therefore, any area likely to represent the sphere of Bristol home trade has to be defined first in terms of river and coastal routes and secondly with land routes. The latter were predominantly those which went east and crossed the Cotswolds, spreading out to the NE and SE beyond; and the Severn and its tributaries to the N and NE and the Bristol Channel to the W and SW are the obvious lines for water connection (Willan 1936b: Maps I-III, 1964 ed; 1938: chapt X esp. pp171-80, 1967 ed; MacInnes 1939: 20-1; cf Minchinton 1954: 71-2; 1962: 5).

One feature which comes out strongly in Willan's studies is the apparently illogical way trade appears to have been organized even within this relatively small area. Bristol has been associated with the wine trade since medieval times (e.g. Sherborne 1965) and with the tobacco trade since the beginning of the C17 (e.g. MacInnes 1926), yet while Willan records these products being reshipped from Bristol he can also record wine and tobacco being shipped *to* Bristol from Exeter (1938: 161, 1967 ed) - indeed even in the C15 wine was being shipped from Chepstow, just across the Bristol Channel (Waters n.d.: 2nd page). Bideford sent sugar and Newfoundland train-oil to Bristol (Willan 1938: 167, 1967 ed), yet Bristol had been associated with the Newfoundland trade since the beginning of the C17 and one of her main imports was sugar from the West Indies trade (e.g. in MacInnes 1939 and Minchinton 1954 and 1962; Buchanan 1967: 11; Buchanan and Cossons 1969: 67-70). South Wales wool was shipped to Bristol clothiers yet Bristol also shipped out wool (Willan 1938: 50, 1967 ed); South Wales iron was shipped to Bristol, where it was reshipped for the South-West and for London (Willan pp69-70). Cornish and Devon copper was shipped direct to South Wales, but it was also shipped to Bristol where some was apparently reshipped to South Wales (Willan pp73-4).

Two of the most flourishing industries in Bristol, to judge by the coastal shipping records, appear to have been the manufacture of glass bottles and metal products (cf Minchinton 1954: 77; 1962: 6, 7; Buchanan 1967: 10; Buchanan and Cossons 1969: 145-8), yet Bristol took most of Gloucester's glass and iron products (Willan pp98-110); indeed throughout Gloucester appears to have reshipped the Severn basin produce to Bristol rather than it coming directly to Bristol. There is a record of clay pipes being shipped *to* Bristol from Caerleon in 1656 (Talbot 1969: 131) and to Bristol among other places from Barnstaple in 1681 (C.M. Watkins 1960: 27), despite the Bristol pipemakers' guild regulation of 1652 forbidding the sale there of any non-Bristol pipes.[42] (The Caerleon reference is curious, for it is not known to have been a pipemaking centre, but in 1700/1 there is a record of two tons of pipeclay being shipped there from Bristol (Talbot *loc. cit.*) which is suggestive, though it might have been for purposes other than pipemaking.)

Such features, however, are not restricted to Bristol: Hull, a pipemaking centre of some importance, received pipes from London in 1683 (Willan p.109) by which time Hull was making its own pipes (Sheppard 1902, 1912 ed); Whitehaven was, if we can believe the records, both sending and receiving slates (Willan pp187-8). One result of this is to blur the origins and destinations of goods: coal shipped from King's Lynn must be

Newcastle coal; pipeclay shipped from Hull and King's Lynn must be Poole clay. Clay pipes shipped from Lancaster to Grange-over-Sands were almost certainly those shipped to Lancaster from Liverpool (Willan passim) - and even these could have come from Chester (see 4: III). Such cases, including ones concerning pipes and pipeclay, could be multiplied; in some cases the answer may be that it was not, for example, the same iron or glass product shipped as was received, but one does get the impression that in many cases trade was disorganized and speculative in nature. The 1634 Boston port-books reference (P.K. Wells files) to a Scarborough vessel taking pipeclay - which must in the first place have come to Boston from Poole or some other south-coast port - from Boston to Danzig is an example of this sort of situation.

Certainly there were plenty of places specializing in producing certain commodities. North Devon sgraffito ware was being produced before 1650, for it had reached Bristol by 1652-56 (K.J. Barton 1965: 193),[43] and it occurs in North America - virtually confined to the tobacco states of Virginia and Maryland - in archaeological contexts of ca.1664-95 (C.M. Watkins 1960: 58-9; Alexander in litt. 23 August and 23 October 1974 for material from the Buck site, Maryland; also Harper 1956: 26-7 for sherds from New Brunswick and 1966: 111 for sherds from Newfoundland; Ekholm and Deetz 1971: 50 for a second Massachusetts discovery). More general North Devon pottery types - identifiable by their unique gravel tempering - had appeared in North America by 1635 and continued to be exported until ca.1760 (C.M. Watkins 1960: 59); and North Devon wares were being exported to Ireland by 1601 (C.M. Watkins 1960: 27; cf Willan 1938: 167-8, 1967 ed) and are known archaeologically or from documentary sources from all along the South Wales coast and at least as far north as Cardigan (Willan loc. cit.; C.M. Watkins 1960: 32 and refs; J.M. Lewis 1967: 106, 113; Talbot 1969: 128-9; J.M. Lewis 1970: 39; cf 1755 ref. quoted in Watkins p.28, Lewis 1970: 40 n.24, and J.K. Knight 1970: 410 noting "great quantities" of pottery from Bideford "exported to Wales, Ireland, and Bristol"; cf also exhibition of excavated material at Spring Conference of the Society for Post-Medieval Archaeology, Cardiff, March 1968; and display at Royal Institution of South Wales, Swansea, seen 1969) and the Scilly Isles (Keen 1969: 147 n.6, Miles and Saunders 1971: 17).

This trade appears to have been a specialized feature within the South-West; there may be others (the emergence of Barnstaple and Bideford as major tobacco ports is no doubt the connection with the locally-made high-class wares occurring in the major tobacco states in North America in the later C17, and the strong wool trade between North Devon and Ireland in the early C17 (Kearney 1959: 134, 153, 154 n.3) probably accounts for North Devon coarse earthenwares there). The studies at present being done on the Donyatt pottery industry of south Somerset, for example (Coleman-Smith and Pearson 1971: 1-6), have indicated another widespread South-West industry whose products or immitations have so far been found as far away as Plymouth, Bridgwater, Wells, Salisbury, and Southampton.

There were certainly also local pipe industries within the South-West. In addition to that at Barnstaple, which has yet to be studied (Wallis 1889: 87-8; T.M. Hall 1890: 317-23; Rippon 1917: 113-5) though its products are known from as far away as Worcester and Plymouth (Oswald 1970a: 134), industries at Amesbury (Stevens 1876: 101-8; D.G. Hurst 1968: 114), Marlborough (Atkinson 1965c, rev. ed 1969b; 1973), and in the C19 at Nantgarw near Cardiff (I.J. Williams 1932: passim, esp. pp139-43; Nance 1942: 412-3) all appear to have been more than purely local industries, and at a local level probably most places of any size had a pipemaker by the later C17. Cardiff certainly had pipemakers by the end of the C17 (M.I. Williams 1962: 86), and though the Taunton industry has never been examined there was certainly a flourishing industry there in the C18, as evidenced by the many Taunton-marked pipes in the Somerset County Museum, Taunton, an industry moreover which used Oswald's type 10 style, as did Barnstaple, as opposed to the type 9 style used in Bristol and Marlborough.

At the end of the C17 Lyme Regis in Dorset was sending pipes to other Channel ports and was importing pipeclay from Poole (Willan 1938: 158, 1967 ed), suggesting a substantial industry, though nothing is known of it otherwise (unfortunately it proved impossible to contact the Lyme Regis museum - see below). In 1687 Poole was sending both pipes and pipe clay to Southampton (Patterson 1966: 3). Gloucester was certainly producing pipes by ca.1700 and appears to have had a Broseley-derived industry on evidence noted by this writer (see Sub-section (c) below), and Willan records (1938: 176, 1967 ed) Gloucester taking pipeclay from Bridgwater (presumably reshipment of Poole or North Devon clay). Willan also notes (p.163) Plymouth sending out pipes apparently of local make towards the end of the C17, and at the same time receiving Poole clay; and Oswald's recent study of pipes found in Plymouth (1970a) indicate pipes were being made there by ca.1600 and into the present century.[44] The most famous pipe industry of all within the general area, and one perhaps as important as that of Bristol, was that at Broseley in Shropshire, beside Ironbridge on the Severn some 15 miles below Shrewsbury and well below the head of navigation of that river. The distinctive Broseley industry, where the Southorn family last century and into this produced perhaps the premier-quality British clay pipes (see Appendix II) and where the same family has recently restarted production (pp145 n18and 262 n.4 above), started ca.1630.

There is more specific evidence which can be considered when delimiting the area likely to have been most closely connected to Bristol. One source is the Bristol apprentice books, which mention the home of those apprenticed to Bristol burgesses (or more accurately, the home of the apprentice's father).[45] A breakdown of these homes by county is available for the 1,426 apprentices for the period 1532-42 where place of residence can be identified (Hollis (ed) 1949: 197). The percentages are as follows (actual figures are given in brackets):

Bristol	28%	(404)	Wiltshire	2%	(35)
Gloucestershire	13%	(185)	Glamorgan	2%	(31)
Somerset	10%	(147)	Lancashire	2%	(30)
Shropshire	5%	(75)	Herefordshire	2%	(28)
Worcestershire	5%	(72)	Warwickshire	1%	(18)
Monmouthshire	5%	(65)	Brecknockshire	1%	(16)
Staffordshire	3%	(41)	Middlesex	1%	(15)
Pembrokeshire	3%	(36)	Cheshire	1%	(13)

In addition 7%, or 100 individuals, came from Ireland. Of these, counties were known for only 45 individuals. Of these 45 the largest single number came from Co. Cork with 16, followed by Co. Waterford with nine. Other counties, listed in order of frequency, were Kilkenny, Dublin, Louth, Wexford, Meath, Limerick, and Tipperary.

A breakdown by county is also available for those apprenticed to Bristol merchants for the periods 1600-30 and 1670-90 McGrath (ed) 1955: 255-7, 1968 ed). It cannot be said that those apprenticed to Bristol merchants are likely to be representative of Bristol apprentices in general, for they usually came from substantial families who could pay premiums and bonds required and provide capital to assist them exploit opportunities when abroad on their master's business (McGrath (ed) 1955: xi, 1968 ed; McGrath 1970: 5-6; cf Willis and Merson (ed) 1968: xvii on Southampton merchant apprentices). Certainly, out of 536 cases in the two periods referred to where the occupation of the apprentice's father was given, gentleman and squire appear 138 times, merchant 127 times, and yeoman 53 times, which would not be representative of most trades, but the place of residence was identified in 370 cases for the period 1600-30 and 222 for 1670-90, large enough figures for percentages to be calculated and compared to those for the period 1532-42. The figures are as follows:

	1600-30	
Bristol	35%	(130)
Gloucestershire	15%	(56)
Somerset	15%	(56)
Devon	5%	(20)
Monmouthshire	4%	(15)
Shropshire	4%	(15)
Wiltshire	3%	(12)
Herefordshire	2%	(8)
Staffordshire	2%	(6)
Worcestershire	2%	(6)
Dorset	2%	(6)
London and Westminster	2%	(6)
Glamorgan	1%	(5)
Cornwall	1%	(5)
Warwickshire	1%	(5)
Pembrokeshire	1%	(3)

	1670-90	
Bristol	47%	(104)
Gloucestershire	13%	(28)
Somerset	10%	(22)
Wiltshire	5%	(12)
Monmouthshire	4%	(9)
Dorset	4%	(9)
Herefordshire	2%	(4)
Cornwall	2%	(4)
Lancashire	2%	(4)
Glamorgan	1%	(2)
Worcestershire	1%	(2)
Montgomeryshire	1%	(2)

In addition, a single apprentice whose father resided in France is noted for each period, and one from Jamaica for the second period. Two from Ireland are recorded during the earlier period, a number which increases to 6 (3%) during the later period.

The comparable figures for those apprenticed as pipemakers, an occupation certainly unlikely to attract a cosmopolitan following, were as follows:

Bristol	69%	(239)
Somerset	10%	(34)
Gloucestershire	9%	(32)
Monmouthshire	5%	(16)
Brecknockshire	2%	(6)
Herefordshire	1%	(4)

Dorset	1%	(4)
Pembrokeshire	1%	(3)
Wiltshire	1%	(2)
London	1%	(2)

(342 out of a total of 347)

(These figures cover the period 1619-1827.)

These sets of figures are discussed in more detail in Section III above, but the most obvious points which emerge are:

(a) Bristol is listed far more often - two to seven times more frequently - than the next most common source, and with a tendency to become more prominent as time progressed; and it must be remembered the city comprised a far smaller area then than now and that Brislington, for example, would be under Somerset and Henbury, Gloucestershire

(b) Gloucestershire and Somerset, the two immediately adjacent counties, are the next most frequent contributors, with virtually identical contributions

(c) these two counties, however, run a very poor second and third to Bristol itself; and

(d) other nearby counties, such as Wiltshire and Monmouthshire never contribute more than 5% and almost always markedly less.

Points (a) and (b) are in no way surprising, but point (c) and particularly point (d) are - one might have expected, for example, Wiltshire and South Wales counties to have been better represented.[46] Further, the tendency for Bristol itself to become a progressively more prominent source as time went on, which the pipemaker entries certainly show, is perhaps surprising when one considers that Bristol as a metropolis had its widest influence in the C18 as Minchinton (1954) shows, not only in England and Wales as already indicated but in its trade with Ireland, the North American colonies, the Mediterranean, and Germany and the Baltic. The two merchant apprentices from France and the one from Jamaica in the C17 suggest Bristol's widespread contacts this early, though doubtless their parents were Bristolians living abroad, but the relatively large number from Ireland must certainly reflect Bristol's economic influence.

A noticeable point in the C16 figures is the indications of contact throughout the Severn basin and beyond into Staffordshire, Cheshire, Lancashire, and even Westmorland contrasted with the virtually total lack of contact south of Somerset into the South-West (cf Hollis (ed) 1949: 15-16). In the C17 contacts with the latter area are slightly stronger, but the emphasis is still mainly on the Severn basin. Those apprenticed as pipemakers, as perhaps befitted their relatively humble social standing, did not come from far afield, the lower Severn basin and South Wales accounting for most of the relatively few who did not belong to Bristol, Somerset, and Gloucestershire. Again, there was little contact with the South-West. In all cases there was a noticeable lack of apprentices from the east - Wiltshire and beyond.

The figures do indicate, however, that Bristol drew apprentices from a wide area. By contrast, the figures for Southampton, a port in decline, indicate that between 1610 and 1710 no fewer than 96% of the apprentices taken came from the county of Hampshire, including the Isle of Wight, 60%

coming from Southampton itself and the adjacent parishes (Willis and Merson (eds) 1968: xxix-xxx). Among those who sought their fame and found fortune either for themselves or their families in Bristol were the Carwardines from Herefordshire, the Frys from Wiltshire, the Hollisters[47] from south Glocestershire, and the Wills from Wiltshire (Little 1954: 113, 171, 112-3, 172, 1967 ed). The origin of some families is sometimes suggested by their surnames (cf Carus Wilson 1933b: passim): the Cherringtons (in various spellings) recorded as pipemakers in the C17 and C18 probably came from Cherington in Gloucestershire, north of Tetbury (Cherington in Warwickshire, north of Chipping Norton, is less likely; Cherrington in Shropshire, west of Newport, much less likely) while the forbears of Richard Nunney, a pipemaker in the second half of the C17, no doubt came from Nunney SW of Frome in Somerset.

Another method of establishing the extent of Bristol's trading influence is to examine the archaeologically-known distribution of Bristol-produced goods. Two types of Bristol pottery - one datable to ca.1680-1760, the other to medieval times - have been studied, and their distributions have been plotted on FIG 152. The former material, a glazed slip-decorated Staffordshire-like ware, was probably made in Bristol, and fragments bearing the dates 1708, 1712, 173(4?), and 1743 are known. What appears to be the forerunner to this type has subsequently appeared in Bristol in a 1652-56 context (K.J. Barton 1965: 194). Unfortunately the number of find spots is not yet great enough to permit definite conclusions to be drawn from the map, but the distribution at present suggests trade north into south Gloucestershire (but apparently not as far as Gloucester) and south into Somerset but hardly any across the Severn and none at all to the east (K.J. Barton 1962: 167, 168). The second group, known as Ham Green pottery from a kiln at that place (near Pill, on the south side of the Avon below Bristol) which on excavation was found to have produced this ware, is not yet firmly dated. Originally Barton (1964: 125) tentatively suggested a C13 floruit, but subsequent evidence (K.J. Barton 1968) suggests the pottery was already being produced in the C12. Its distribution is much more widespread than that of the yellow slipware (but note that Barton's distribution map - 1964: 116 fig 8 - does not wholly agree with his list of find-spots) and indicates considerable trade with South Wales coastal settlements and via the Usk, Wye, and Severn routes. Distribution south of Bristol appears to have gone virtually no farther than the south slopes of the Mendips; the eastwards spread is similarly limited, only one find being known east of Bath (the distribution shown in FIG 152 is based on the lists in K.J. Barton 1964 and 1968; also Arch. Rev. 4 (1969) s.v. Wraxall; op. cit. 5 (1970) s.v. Alkington; and Fowler and Walthew (eds) 1972: 55). The Welsh distribution and the finds from Dublin can be paralleled in Bristol's C15 trade (Carus Wilson 1933b: passim); the lack of penetration east may be connected with the poor transport afforded by the Bristol Avon, not navigable before 1727 even as far as Bath, and this may equally be a reason for the lack of yellow slipware of the period ca.1680-1760, despite the widespread road transport cited by Minchinton.[48] (An interesting comparison can be made between the distribution of C12-C13 Ham Green ware and that of jugs with a characteristic frilled neck-band and datable to the late

C13-early C14 which, though their centre or centres of manufacture are as yet unknown, are common in the Brisol hinterland. Here, trade to the south and SW reached central Somerset and to the east as far as east-central Wiltshire, rather farther than Ham Green ware had spread, but there is virtually no spread into south Gloucestershire at all. On the other hand, there is trade up the Wye and Usk and along the South Wales coast; and there is a large concentration of finds from Co. Down and Co. Antrim, with scattered finds from farther south, in eastern Eire (Waterman 1960: 160 fig 59, 159; additional South Wales finds in J.K. Knight 1970: 89, 103 n.27). Wherever these jugs were manufactured, their Welsh and Irish distribution strongly suggests they formed part of Bristol's trade with these areas.)

It seems unlikely that the virtual lack of the yellow slipware in Wales indicates a lack of Bristol trading connections with South Wales at this time. The lack of finds may merely indicate lack of recognition of the material or lack of excavations on sites of this period - certainly Willan (1938: 100, 1967 ed) notes Bristol sending in the 1680s and into the C18 earthenware to Gloucester, South Wales, the South-West and as far away as Southampton. Perhaps more likely, the rise of local potteries had reduced the sphere of Bristol influence in this particular line since medieval times. A number of South Wales post-medieval potteries besides the famous Swansea and Nantgarw "artist potteries" are known (Talbot 1969: 132-9), though much work remains to be done on them, their products, and their trade. The first industrial production of pottery in the Swansea area was not until 1764, though there is a tradition of delftware production prior to that date (Nance 1942: 8).

Certainly Bristol capitalists seem to have concentrated their C18 investment in South Wales (Minchinton 1954: 82-5), and Bristol contacts occurred at much more mundane levels: as is discussed in detail later, John Frederick Bryant jr had in the 1780s twice tried to set up a market for his products at Carmarthen and had, also unsuccessfully, tried to obtain a derelict pipe-manufacturing premises in Swansea; and in the early C19 Bristol pipemakers were more successful, apparently starting, or perhaps restarting, the industry in Swansea and also working in Cardiff.

One feature common to the distribution patterns of both the medieval and C17-C18 ceramics is the apparently total lack of penetration (if Lundy is excluded) along the southern shore of the Bristol Channel. Here too, it may be suspected that local pottery industries, such as that at Nether Stowey in north Somerset for example (Coleman-Smith and Pearson 1971: 6-8), had established their own markets - certainly a number of medieval Somerset potteries are known from documentary evidence (le Patrouel 1969: 135 fig 25). Further, the ancestry of the North Devon pottery industry, already noted as exporting to Ireland by 1601, may well lie in the medieval period: there was a Crock Street in Barnstaple Oy the early C14 (Strong 1891: 390; cf Miles and Saunders 1971: 17, 18, 19). As regards trade in the South-West, certainly as late as the 1890s the famous North Devon clay ovens, remains of one of which were found at C17 Jamestown (Cotter 1958: 74, pl 38), were being sold in north Cornish fishing villages (Strong 1891: 392; cf Hall 1890: 321; Charbonnier 1906: 257; Holland 1958: 15-16, pl 1 caption). Rather similar sgrafitto wares to those made in North Devon were being made from the C17 to the present century at the villages of Crock Street and Donyatt, SW of Ilminster in the extreme south of Somerset, one fragment occurring in a ca.1765 context at Williamsburg, Virginia; potters were already known at Donyatt in medieval times, and a Bideford potter and his family settled there in 1691 (Charbonnier 1906: 257; Honey 1952: 151, 184; Radford and Hallam 1953: 81-8; I. Noël Hume 1963: 286 and 1970c: 105; le Patrouel loc. cit.; Coleman-Smith and Pearson 1971: 1-6). Local pottery industries often continued for many centuries - le Patrouel notes an area of Essex where potting is known from the C13 to C19 and another in Somerset (Pill, now on the outskirts of Bristol) where the trade is noted from the C13 to C18 (le Patrouel 1969: 124 table VI).

In summary therefore one can say that the various strands of very diverse evidence all agree in suggesting that Bristol's main contacts were with the Severn basin and the north shore of the Bristol Channel. The South-West - Devon and Cornwall - appears to have had much less contact as do points east, even as close as Wiltshire.

To determine the extent of trade in Bristol pipes within this area of contact, a survey of museum pipe collections was undertaken. In all 14 counties were chosen to cover the area.[49] They were:

Cornwall
Devon
Dorset
Somerset
Wiltshire
Gloucestershire
Warwickshire
Worcestershire
Herefordshire
Brecknockshire
Monmouthshire
Glamorgan
Carmarthenshire
Pembrokeshire

The area is enclosed with a continuous line in FIGS 152-54 and 159.

To choose a geographical area first and then study distribution inevitably prejudices the latter, but as this is the first detailed study of Bristol pipe material attempted it seemed better to concentrate the search for identifiable material in the most likely area, making sure at the same time that the area chosen was liberally-enough defined to extend somewhat beyond the most likely region. In the event, Adrian Oswald most generously made available from his unpublished notes finds of Bristol material beyond the area defined. To extend the area of detailed study would have involved studying other pipe industries: in particular, Shropshire could on previous evidence have been included, but to do so would have involved studying the Broseley pipe industry, a whole topic in itself. Indeed, work by A. Peacey of Stroud (to whom I am indebted for information in advance of publication) indicates the Wiltshire and Broseley industries penetrated Gloucestershire at different times; and as this study will show later (pp688-91), Broseley influence was spreading down the Severn valley even to Bristol and as far as South Wales on one side and western Oxfordshire on the other and Herefordshire influence was spreading into South Wales from the last quarter of the C17 onwards. It was decided, however, to include among museums to be visited ones at Bournemouth, Christchurch, Southampton, and Winchester in Hampshire to the SE of the area; that at Filkins, Oxfordshire, to the east; and that at Llandrindod Wells, Radnor, to the NW.

In all, 105 museums in the 14 counties and 11 in the additional centres included were considered possible places to have collections of clay pipes, and all were sent a circular letter asking whether in fact they had pipes. Out of this 116, seventy-seven had. A further two, those at Portland and Lyme Regis, both in Dorset, proved impossible to contact either by recorded-delivery letter or by telephone. Of these 77 only one, that at Sudeley Castle, Gloucestershire, declined to co-operate in the survey, leaving a total of 76. Private collections were not sought out, but one in South Devon and another in Herefordshire were examined as a result of contacts made while visiting museums there and two collections in public houses, one in Bristol and the other in north Somerset, and one at Courage's Brewery in Bristol were similarly visited. D.R. Atkinson's study of material found in and about Marlborough (Atkinson 1965c, rev ed 1969b; 1973) enabled this material to be added to that considered. Through the kindness of Mr Jeremy Knight, I was able to inspect material from Raglan Castle in the possession of the Department of the Environment's Cardiff office. The material in the collections in the Department of Medieval and Later Antiquities of the British Museum was also examined - this included the Bragge Collection (itself containing the R. Thursfield, Bernhard Smith, Bousefield, and Southorn Collections; cf T.H. Thursfield 1907: 161-2) and those pipes used by Pritchard to illustrate his 1923 paper on Bristol pipes. The presence of this part of Pritchard Collection at the British Museum does not appear to have been hitherto noted. The final total of museums or similar repositories whose material was examined therefore came to 84 (listed in Appendix VIII).

(2) Distribution

The use of museum collections to obtain an idea of extent of trade in items has certain limitations. Quality of collections vary considerably from museum to museum, small non-professionally run museums being by no means necessarily the worst offenders. Interest in only certain types of material acquired or accepted probably accounts for some large museums having only a very limited amount of pipe material; conversely a small museum such as Stroud can have a curator interested enough to make plaster casts of maker's marks from all pipe material which comes his way but does not get donated to the museum.

Many museums do not have all their pipes - or sometimes any of them - provenanced, and while it is tempting to assume that items as ubiquitous and unspectacular as clay tobacco-pipe fragments in collections must be local finds, evidence indicates this need not be the case: even in small museums there are pipes which for various reasons, such as perhaps a local resident finding material while away on holiday, are given to museums far away from their find-spot. The Art Gallery and Museum at Merthyr Tydfil, for example, has an unmarked pipe of the West Country "chinned" type datable to the second half of the C17 which is said to have been found "in the grounds of Exeter Castle", while the City Museum and Art Gallery at Worcester has a typical Oswald type 10 South-West style pipe from Newbridge in South Devon and the County Museum at Carmarthen has four pipes of the mid-C17 - one inscribed with the date 1644 - from Wolvesey Castle at Winchester. An extreme example of a non-local pipe finding its way into a small museum is one from Edinburgh Castle in Devizes Museum - the pipe is later C17 in date and bears the triple-towered castle mark which is the coat of arms of

Edinburgh and occurs on other pipes from Edinburgh and SE Scotland (see p.349 above). In the case of unprovenanced material in county museums or other museums consciously serving a wide area the problem obviously becomes greater; both the Somerset County Museum at Taunton and the City Museum and Art Gallery at Gloucester have material found in Bristol. In citing museum material in this section therefore (or at least material actually seen by this writer), the difference between material at a museum and that from a site will be kept as clear as possible by using the words "at" and "from" regularly as in the contexts above.

Unfortunately, the planned visits to museums had to be interrupted for a period of more than two years, which caused inevitable breaks in continuity of thought and familiarity with material. Further, the need to examine so many collections which did have marked pipe material resulted in it being generally impossible to spend as much time as one would have wished ferreting about in these collections and finding mislaid material. In addition, as this part of the work proceeded it became apparent that some museums written which had stated they had no marked pipe material did have, or at least had had when certain colleagues had visited them within the previous few years. Thus comparisons between material seen by this writer and material listed in some articles on pipe collections or in excavation reports listing pipes before their deposition in a museum have indicated discrepancies. It is hoped, however, that there are few omissions of importance; as will be shown in the following pages, the pattern of trade revealed by this study seems quite clear.

It is worth stressing at this point that the overview of Bristol material in the various museums visited very definitely does not take the place of publications dealing in detail with local collections of pipes - more detail than it was possible for this writer to give. A number of papers dealing with museum and other collections within the area taken by this writer have appeared in recent years; Atkinson's papers on pipes from the Marlborough area (1965c, rev ed 1969b; 1973), in the Salisbury and South Wiltshire Museum at Salisbury and from other local Salisbury finds (1971; 1973); Oswald's on pipes in the City Museum and Art Gallery at Plymouth (1970a); Owen's on pipes from the Roman Bath Museum at Bath (1967); and E. Watkins's on pipes in the Dorset County Museum at Dorchester (1966). More of this type of paper are needed for museums large and small all over the country, and indeed for many artefacts other than clay pipes. Ironic as it may seem in a work of this size to say that the extensive collections in the Bristol City Museums have still to be published in a manner similar to, say, Atkinson's coverage of Marlborough and Salisbury pipes, it is a fact that such a study would by no means totally repeat the work presented here.

In identifying Bristol pipe material one is greatly helped by the fact that a relatively high proportion of Bristol makers between the late C17 and sometime in the mid-C18, and in some isolated instances in the middle and second half of the C17, most sportingly identified their products by putting their name on them. In the C19 the widespread custom of marking one's products with one's name and place of work was known in Bristol, though only a few Bristol products have been identified in this way. From the C17 and C18 marked material it is possible to identify certain pipe shapes or styles of marking as being predominantly or wholly Bristol, and from this one can with some confidence suggest similar pipe types marked only with the maker's initials may be products of other Bristol pipemakers. This latter can be strengthened by other evidence, such as the pipes being kiln wasters or associated with kiln material which would indicate local production, or simply by the frequent occurence of consistently similar material or maker's marks within the city particularly when the marks can be equated with the initials of a known maker of the correct period.

This last may seem a dubious method of finding convincing identifications, but in a city with as major an industry as Bristol's it is reasonable to suppose a definite majority of pipes found can be considered Bristol-made; and the Bristol pipemakers' guild charter of 1652 did forbid the sale within the city of pipes not made by members of the guild (Appendix VI). Regardless of how effective this latter stricture ever was - as noted in Section II(d) above, guild control over trades became an unenforceable anachronism in the C18 - it is a fact that relatively little definitely non-Bristol material was found by this writer in the Bristol City Museum or Blaise Castle Folk Museum collections.

However, in deciding which pipes can be identified with Bristol makers, this writer has deliberately taken a minimal view,[50] restricting such identifications to ones which he feels are certain or virtually so. This is primarily to provide a conservative survey to replace the only previous study of Bristol pipes, that by Pritchard as long ago as 1923.

Pritchard's study, while still useful, contains a number of errors and omissions, and is restricted to the C17. For example, Edward Battle A 1651 F 1660 fl 1669 did not become free in 1650 (p.180); Timothy Ricketts F 1669 is consistently referred to (pp181, 182 twice, 183) as Timothy Risbett; Robert Tippet I F 1660 fl 1680 D by 1687 is listed (p.181) as an apprentice of Llewellin Evans becoming free 1671, which is wrong on both counts; freedom dates quoted do not take into account that until 1752 the year began on 25 March, so that from time to time Pritchard gives a date a year too early. Only the freedom rolls appear to have been consulted, with the result that those pipemakers active prior to the first one recorded in the freedom rolls, in 1640, and cited by Pritchard (p.174) as the first Bristol pipemaker, William Lewis fl 1639/40 F 1640 prob. D by 1652, have been ignored and the first reference to pipemaking in Bristol delayed 21 years (see Section I above); another result of the non-use of the apprentice rolls is that Pritchard guesses at apprenticeship dates by subtracting the standard apprenticeship term of seven years from the date of freedom, a process which only rarely gives the correct date and ignores the fact that not all freemen pipemakers did serve an apprenticeship (see above passim, esp. Sections II(b), III, and IV).

In addition, a number of Pritchard's identifications are, as he himself indicates, only possibilities, and some are rather speculative. For example, he suggests (p.181) that examples of impressed marks incorporating the letters WC, two with decorative motifs above and below, the other plain, may belong to William Cherrington sr F 1660 fl 1679 prob. fl 1696 while two other sets of marks incorporating the same letters, raised, may be the mark of William Cissell F 1660/1 - not 1660 as Pritchard says - fl 1669/70, his reasoning being that the mark he suggests is Cherrington's also occurs on larger pipes which he suggests are the products of Cherrington's son William *jr* F 1690. This is a reasonable enough speculation on the evidence used by Pritchard, but he did not know that William sr was working at least as late as 1679 and probably as late as 1696 and that modern knowledge of pipe typology would date the "larger" examples he notes and illustrates (pl VI, 76 and 77) to the 1670s and certainly before the 1690s; so that they could perfectly possibly have been produced by Cherrington sr and would almost certainly not have been produced by his son. With Cissell also known to be working at least as late as 1670, there is really no way of knowing which of these two groups of marking with the letters WC belonged to which of these two makers.

Further, as Pritchard used only the freedom rolls to identify makers, he was unaware of a *third* maker with these initials, *William Carter*, who is recorded taking an apprentice in 1641 and was dead by 1647 when a daughter was apprenticed to a Bristol cordwainer. Two marks with these initials, one plain and one with decorative motifs and both of the type identified by Pritchard with Cherrington, occur in a deposit at St Nicholas's Almshouses in Bristol archaeologically and historically datable to 1652-56 (K.J. Barton 1965: 210 fig 72, 212 and *passim*) and associated with other pipes - Berryman, Edward Lewis, Philip Edwards sr, and probably Flower Hunt examples - which would certainly fit that context: unless they are intrusive these WC-marked pipes cannot be products of either Cherrington sr (F 1660) or Cissell (F 1660/1), which appears to leave only Carter as the maker, an identification which if correct presents a real problem as to the identification of the later C17 marks Pritchard attributed to Cherrington jr.

Pritchard also suggests that Jeffry Hunt, whose pipes are common not only in Bristol but all over the West Country, was probably a Bristol maker related to *John Hunt* F 1651 fl 1653, and *Flower Hunt* F 1651 fl 1670 D by 1672, though he admits Jeffry does not appear in the freedom rolls (pp178, 177). In fact the elusive Jeffry, whose pipes are at least as common and widespread as any of the other Hunts, has yet to be identified; but it is virtually certain he did not work in Bristol, and Pritchard's tentative identification of him in "the old rate book" of Bristol (p.178) is a misreading of his source, which incidentally he does not cite (this and Jeffry Hunt are discussed below).

These and other reservations about Pritchard's identifications suggest it would be best to restrict this survey of the extent of distribution of Bristol pipes in England, and the survey in the following section of distribution of Bristol pipes abroad, to material which can generally either be regarded as certainly identified or can be identified to this writer's satisfaction. Thus while bowls with the marking ascribed by Pritchard to William Cherrington sr (above) occur at Weston-super-Mare and Hereford and from Caerleon (in the National Museum of Wales, see also J.M. Lewis 1967: 115-6) and can be confidently ascribed to a Bristol maker on grounds of appearance from Bristol sites and on shape, they are not included in the material discussed here because their identification as to maker is not certain. In the case of bowls with maker's initials only, it has been difficult to be absolutely consistent as to when an identification has been decided as certain enough to warrant inclusion of these bowls here - it seems almost certain that bowls of ca.1650-ca.1670 forms with the initials FH on their heel are products of Flower Hunt, for example, though pipes ascribed here to that maker have been restricted to those actually bearing his name, and other initial-marked bowls omitted here probably have as much right to have been included as those which actually have been. Basically, however, identifications based on initials, even if the maker with these initials is the only one whose dates fit the bowl shape or floruit of marking style, have been minimized. Another reason for restricting positive identification of Bristol-made material within fairly rigorous bounds is that while there are what appear to be distinctively Bristol bowl shapes, two of the most famous which are frequently called Bristol shapes, that of the mid-C17 as used by members of the Hunt family (the "chinned" style) and that from the late C18 onwards best known from the products of makers such as the Tippet family, are not confined solely to Bristol makers either in shapes or in marking, but belong to a more general West Country pattern (this is discussed in more detail below). The occurence of these styles in various collections, therefore, is not proof of specifically Bristol trade, and again it has been considered better to generally omit reference to otherwise unidentified finds of this material. While this may reduce considerably the amount of possible Bristol material which could be added to distribution maps it seems unlikely that the omission of this material would significantly alter the distribution, and its omission has the advantage of reducing discussion to reasonable certainties; as noted above, a clear pattern of trade, both at home and abroad, is seen to emerge from this study and that in the following section, suggesting the substantial accuracy of this approach.

The earliest Bristol pipemaker whose products have been found is in fact the first recorded Bristol pipemaker, Richard Berryman (fl 1619-52). He appears to have had a wide market, for his pipes occur in collections at Bath, Devizes, Gloucester, Hereford (from excavations at the Castle Green there), Monmouth, Abergavenny, Cardiff (three from excavations at Caerleon near Newport, see J.M. Lewis 1967: 115-6), Taunton (from Cannington NW of Bridgwater), and Plymouth (two from excavations near the old harbour of the city), as well as from Raglan Castle in Monmouthshire where three were found during Department of the Environment work (distribution in FIG 153). Almost as early, and almost as widespread, are the products of the Edward Lewis A 1624 fl 1631-40/1 prob. D by 1652, which occur in collections at Cirencester (two examples), Stroud (from Leonard Stanley west of Stroud), Gloucester (two specimens, one known to be from Gloucester), Worcester (at least five specimens; Oswald 1962: 48, fig 5,1 notes an example from Worcester), Abergavenny (six specimens; Radcliffe and Knight 1974: 101, 100 fig 16,18-19 note three), St Fagans (from St Fagans itself), and Taunton (at least 17 specimens from Downside; Oswald in litt. 1 December 1970 notes an example from Downside Abbey[51]), as well as from Montgomery Castle (in a pre-1649 context, noted in Radcliffe and Knight 1974: 101) and from Marlborough (FIG 153). Berryman and Edward Lewis pipes occur in the 1652-56 deposit at St Nicholas's Almshouses, along with pipes of Philip Edwards sr (see below) and examples probably belonging to Flower Hunt (see below) and possibly to William Carter (see above) (K.J. Barton 1965: 210 fig 72, 212), an association compatible with the other evidence for dating.

Chronologically, the next-earliest Bristol pipemakers whose products have been found traded outside Bristol are Philip Edwards sr who became free 1649/50 and the two Hunts, John and Flower, who became free 1651. A discussion of the Hunts leads conveniently to a broader discussion of the whole Hunt family of pipemakers, other members of which (e.g. Jeffry noted above) have sometimes been claimed as also being Bristolians, so for this reason, and also because it is not always easy to separate Edwards's products from those of his son Philip jr, a discussion of Edwards's material follows an examination of the Hunt family.

John Hunt, as indicated above, became free 1651; the only other reference to him is in 1653, when he and his wife Jane took an apprentice to whom no further reference appears. As noted in Section I above, this may indicate that Hunt died fairly soon after starting business in Bristol, though the widespread finds of pipes with IOHN/HVNT (the N and T of Hunt diphthonged) or IOH/N·HV/NT on their heel and certainly datable to the mid-C17 suggests he must have been a busy maker when alive. Pipes with these marks occur in collections at Bath (from the city itself), Devizes (two examples from Marlborough), Malmesbury (two examples), Abergavenny, Bideford, Weston-super-Mare, Frome (from Beckington 3 miles NE of Frome), and Salisbury, as well as appearing in Marlborough collections. They have also been recorded from as far away as London (T.G.H. Price 1900: 234 and fig 15; Atkinson 1962a: 184, 183 fig 1,13 and b)[52] and Great Meols in Cheshire (noted in G.C. Spence 1942: 55; cf H.E. Smith 1860: 215, pl VIII 2nd from top left). The W.J.B. Smith pipe collection (latterly part of the Bragge Collection, now in the British Museum), which came "mostly from the Midland Counties" and certainly had an appreciable quantity of Broseley material, included both John and Thomas Hunt pipes (W.J.B. Smith 1878: 31), suggesting they may have been found in the Midlands. Oswald (*in litt.* 1 December 1970) also notes John Hunt pipes at Taunton, though none was noted by this writer.

Flower Hunt also became free 1651; he certainly continued working in Bristol, and to judge by the regularity with which he took apprentices (Section I above) was an industrious pipemaker. He was still working in 1670 but had died by 1672; his wife Christian continued his business and was still working in 1693, though she may have been dead by 1696. Four sons were all trained as pipemakers:

Thomas; A 1672
Richard; A 1677, app. F by 1693, D by 1694
John; date of apprenticeship unknown, F 1689)
) one fl 1716/7
another John; A 1685/6, F 1694)

All four were apprenticed to their widowed mother. Curiously for a man with such a going concern, Flower Hunt's pipes have been found beyond Bristol only at St Fagans (Oswald *in litt.* 1 December 1970; not seen by this writer), though there is also an example known from Ireland (see following section on trade abroad).

As noted in Section I above, John and Flower Hunt must have been fairly well-to-do as well as interested in prospects of expanded business to move from wherever they had been working previously to Bristol, for each paid a

£5 "fine" on becoming a freeman in addition to the normal fee of 3s4d; where they came from, however, does not appear in any documentary source. Several other pipemakers connected with the founding of the Bristol guild in 1652 paid £2, but no others paid £5, which suggests the Hunts - whom one supposes to have been brothers, though there is no actual evidence to support this - may have been key members in the formation of the guild, brought in for their skill and experience from some place already known for its pipemaking. However, the identification of Hunt pipemakers is much complicated by a positive excess of makers with this surname working in the West Country in the second half of the C17 and about whom very little is known either as to dates or places of working. In addition to John and Flower there is at least one Jeffry Hunt, whose place or places of work remain uncertain and whose identifiction is unknown despite the frequency with which pipes heel-marked in a variety of ways with his name occur and the widespread nature of their distribution in the West Country. They occur as far afield as Southampton, Wimborne Minster, and Dorchester in the south, Gloucester and Oxford (Oswald 1970b: 244 and pl 211 btm rt) in the north, Taunton, Bridgwater (Atkinson 1972c: 157), and St Fagans in the west, and come from Marlborough in the east. Jeffry Hunt bowls cover typologically the whole of the second half of the C17; the latest is one at Wells datable to the decades on either side of 1700 with IEF/HVNT (the N and T of Hunt dipthonged) impressed on the top of the stem near the bowl and at right angles to the axis of the stem, a form of marking characteristic of Wiltshire and Hampshire makers which does not appear until the 1680s when it is associated with the same type of bowl as that here (Atkinson 1965c: 87-8 and passim, rev ed 1969b; 1971: 181 and passim). A stem-fragment from near Salisbury with what appears to be the name Jeffry Hunt (Atkinson in litt. 31 December 1971) is, if correctly identified, further proof that Jeffry, or at any rate a Jeffry, was making pipes as late as the end of the C17.

Atkinson convincingly suggests (1972c: 159) that latterly Jeffry probably worked in Devizes, in which area later-style Jeffry Hunt pipes are concentrated; but his other suggestion, that another Jeffry, father of the Devizes Jeffry, made the earlier pipes in Bristol and was connected with Pritchard's suggested identification of Jeffry Hunt (Pritchard 1923: 178), seems unlikely to this writer. It is more likely the earlier Jeffry, or the Devizes Jeffry at an earlier stage in career, worked in some other centre with an as-yet unstudied pipe industry: there is evidence small centres could have an industry with widespread trade.

One such example is provided by pipes datable to the second half of the C17 marked GEO/RGE/BVT on their heel which occur at Weston-super-Mare (two examples), Taunton (two examples - one from Glastonbury Abbey), Shaftesbury, and Birmingham (from Downside Abbey), as well as from Cheddar and Glastonbury Tor (Oswald 1971: 54), suggesting a reasonably widespread business. In fact But (or Butt) worked in the north Somerset hamlet of Stratton on the Fosse ca.5 miles NE of Shepton Mallet, and the only reason we know this is because he happened to apprentice his son Joseph to Edward Randall sr, a Bristol pipemaker, in 1670 (see Appendix IX) and his trade was recorded at that time. A pipe marked WIL/IAM/BVT at Devizes and four at Honiton and one at Shaftesbury marked RIC/HARD/BVT suggest several of the family may have been in business, but as yet nothing is known about them or where they worked (Joseph took his freedom in Bristol only in 1704, and nothing further is known about him). Again, there was clearly an important industry in the second half of the C17 at Chard in the extreme south of Somerset, for a pipe marked GEO/WEBB/IN/CHARD is at Taunton, four others marked GE/ORGE/WEB are also at Taunton (two from Taunton itself, one from Chard, and one from Cannington near Bridgwater in west Somerset), and and another marked GE/ORGE/WEB is at Dorchester (from that town). Examples marked George or Charles Webb and made in Chard were found at Donyatt ca.4 miles north of Chard (Coleman-Smith and Pearson 1971: 3) and pipes marked "George Webb in Chard" were found at Nether Stowey ca.9 miles west of Bridgwater and in west Somerset (Coleman-Smith and Pearson 1971: 8). A fragment heel-marked E+C/INCH/ARD at Taunton indicates the Webbs were not the only pipemakers in Chard, but so far nothing is known about the Chard industry beyond these pipes. Taunton itself must certainly have had a major industry at least in the earlier C18 to judge by the number of pipes (including ones made by EC, who perhaps came from Chard) with makers' names or initials and Taunton on them, but again no work has been done on the industry there.

There are still other pipemakers called Hunt working in the West Country in the second half of the C17, however. There is an otherwise unknown William Hunt, a pipe of whose, typologically dating to about the 1670s, is at Taunton. There is also at least one Thomas Hunt producing pipes typologically datable to the whole of the second half of the C17 and whose variously-marked pipes occur in the West Country over a wide area - at Bideford in the west, at Cirencester in the north, at Taunton and from Salisbury in the south, and from Marlborough in the east - and from as far afield as London (T.G.H. Price 1900: 235; Atkinson 1962b: 184, 183 fig 1,44), Cambridge - if the typical West Country chinned bowl pipe from King's College described by T.McK. Hughes (1900: fig 3) as being marked "Thomas Bun" on the heel is in fact a misreading of Thomas Hunt[53] - Durham (Parsons 1964: 238), and possibly from the Midlands (W.J.B. Smith 1878: 31 - see above, discussion of John Hunt finds).

A Thomas Hunt is recorded working at Marlborough in 1667 and is still there in 1696; the earliest pipes marked Thomas Hunt are dated by Atkinson to ca.1640, but Thomas Hunt pipes do not appear in Marlborough before ca.1660, suggesting either that Thomas Hunt moved from elsewhere to Marlborough ca.1660 or else that there was another and earlier Thomas Hunt working elsewhere in the West Country. Even the Marlborough Thomas Hunt, however, cannot be the Thomas Hunt son of Flower Hunt of Bristol noted above, for the latter was not apprenticed until 1672. A possible connection between Thomas Hunt and John Hunt, however, may lie in the former's use of his name in script as a mark (Atkinson 1962a: 183 fig 1,14; 1965c: 89 fig 1,7, rev ed 1969b; 1973: 155), for Oswald (in litt. 1 December 1970) notes John Hunt chinned bowls from London with that name in script. The Thomas Hunt script mark, incidentally, is an accurate copy of his signature as it appears on an apprentice indenture at Marlborough (Atkinson in litt. 29 August 1971).

As a final note of complexity, three Hunts - John, Thomas, and Richard - sign the ca.1696 oath of allegiance to William of Orange presented by the London pipemakers' guild, John and Thomas signing one below the other

(R.H. Cooper in litt. 19 December 1972). All sign as journeymen, so that the John Hunt- and Thomas Hunt-marked pipes noted from London (above and p.598) are unlikely to be products of the John and Thomas Hunt listed unless they subsequently became masters there, for which there is no evidence. The fact that John and Thomas Hunt sign the document together suggests they may have been relatives (the signatures on the document are not in alphabetical order), and it is tempting to suggest they could have been respectively one of the two John Hunts both sons of Flower Hunt (one F 1689, the other F 1694, one still in Bristol in 1716/7) and Thomas Hunt their brother A 1672 and noted above. This, however, is entirely speculative. (Curiously, the two John Hunts and Thomas Hunt did have a brother Richard, also a pipemaker, as noted on p.598 above, but in this case it is certain the Richard Hunt in London is not the Bristol Richard Hunt, for the latter had died by October 1694 and though his freedom date has not been found - he was apprenticed in 1677 to his mother Christian Hunt for seven years - he probably worked in Bristol all his life, he and his wife certainly taking an apprentice there in August 1693.)

This discursive account of the various Hunt pipemakers working in the second half of the C17 in the West Country relates to an investigation of the Bristol Hunts and their origins. The most important point is that whatever relationship there exists among these makers it cannot be purely one of descent. We know that John and Flower Hunt in Bristol both arrived there in 1651 and we know that a Jeffry and a Thomas Hunt were producing bowls of the same pattern and the same sort of maker's mark at approximately the same date. As no Hunt products datable to earlier than approximately the middle of the C17 appear to exist it is difficult to suggest that one of these four was the father of the others; four brothers seems more likely. As already noted, John and Flower appear to have come to Bristol from a place where they were already established; one might hypothesize that Jeffry and Thomas were brothers of the other two who continued working in the original Hunt business. Jeffry and Thomas may latterly have moved to Devizes and Marlborough respectively, or they may have had sons of their own name who moved there, but in any event the relationship of Jeffry and Thomas to the Bristol Hunts and their families must have been collateral. William Hunt could be a son of Jeffry or Thomas; there is no evidence he was a son of either of the Bristol Hunts [but see now Preface].

A clue to the place, or at least the area, of origin of the Hunts may lie in the distinctive bulbous or "chinned" bowls they produced in the middle and the third quarter of the C17. This style is variously called Bristol style, or West Country style (Atkinson 1971: 177), or Bristol-Wiltshire style (Atkinson 1970a: 208); and Atkinson (1965c: 177-8, rev ed 1969b; 1970c: 208; 1971: 177) has suggested the occurrence of bowls of this shape in Wiltshire and Hampshire reflects the spread outwards from Bristol-trained makers, journeymen and younger sons of established pipemaking families. In this writer's opinion, however, it is less specifically Bristol than is generally claimed. Of those Bristol makers whose products can be positively identified, only the two Hunts appear to have consistently manufactured pipes in this style, whereas there are a number of bowl-styles made by their Bristol contemporaries which appear to be *specifically* Bristol in style.

None of the Edward Lewis pipes and only one Richard Berryman pipe (fig *k*; which, however, could easily be late) have any similarity to the Hunts' "chinned" style; and early Philip Edwards sr pipes (e.g. fig *c*), which presumably date to the 1650s, are similar to some Berryman and Lewis pipes (e.g. Berryman fig *f* and Lewis figs *b* and *f*) (figure references given in this manner - a lower-case letter italicized (underlined) - refer to illustrations in Appendix IX under the relevant maker's entry). As already noted in Section I above, there is a possibility that Berryman was a Londoner. The evidence is by no means conclusive, but there is an inevitable tendency to look to London when considering pipemakers appearing in the provinces as early as the second decade of the C17 (cf Atkinson and Oswald 1969: 201 and 203, 204), as here; and Berryman's bowl forms and those presumably copied by Lewis and Edwards are similar to known London forms of the first half of the C17 (e.g. Atkinson and Oswald 1969: 178 fig 1,4-5 and 10, 184 fig 4 *passim*). Where Edwards came from is unknown - he was probably a pipemaker before coming to Bristol - but Lewis was already a second-generation Bristol pipemaker, his father being the Samuel Lewis fl 1624-26 who also did blacksmithing. While it may be too early to talk of these pipes being a Bristol "type", therefore, one can suggest that Berryman's London-style moulds were being used to make Bristol pipes which as late as the 1640s and 1650s (Berryman was still alive in 1652) were quite different from the "chinned" Hunt style of pipe.

Other Berryman and Lewis bowl shapes (Berryman fig *g* and Lewis figs *a* and *h*) are of a pattern used by Thomas Monkes fl 1656 and 1669/70 (fig *d*) and in modified form by one or other of the Philip Edwardses - probably the elder (fig *m*) - by Richard Nunney F 1655 fl 1696 D by 1713 (fig *b*), and by Robert Tippet I F 1660 fl 1680 D by 1687 (fig *a*). A later and enlarged version is represented by other pipes belonging to Monkes (figs *c* and *e*), to a member of the Edward Lewis family (poss. the Edward F 1678/9 fl 1722 grandson of the Edward above; figs *n* and *o*), to one or both of the Philip Edwardses (figs *i* and *j*; Philip jr was apprenticed 1668/9, became free 1680/1, and was still alive 1696), and to Richard Nunney (e.g. Pritchard 1923: pl V,37-37a, p.180 - figs *d* and *e* here; Atkinson 1965a: 251 fig 5,77 and 256 additional note). This too suggests a Bristol type evolving from about the 1640s; the large version mentioned in the preceding sentence, which is probably datable to the 1670s, is a definite and characteristic shape used by other Bristol makers, as for example those attributed by Pritchard to William Cherrington jr (1923: pl VI,76-77, p.184; the attribution to Cherrington *jr* is certainly incorrect, the bowl being ca.20 years earlier than his freedom date of 1690, see above).

Two other distinctive Bristol bowl shapes, both also probably datable to the 1670s, appear to have been restricted virtually to the three Evanses who worked in the second half of the C17. One of these shapes was produced by Llewellin Evans (prob. A 1654, F 1661, fl 1684, D by 1688/9; figs *d* and *e*) and one or other - or perhaps both - of the William Evanses (one A 1653 F 1660, the other A 1660 F 1667, both fl 1682 and at least one fl 1697, the later William poss. a brother of Llewellin; fig *b*). The other bowl shape appears to be a variant of Oswald's type 7 and to have been restricted to one or both of the William Evanses (figs c and d), though a similar shape also appears attributable to James Fox (prob. A 1639/40, fl 1651, F 1654, fl 1668/9) - typologically, however, these latter should be datable to ten or more years after the last certain date - 1668/9 - known for Fox (see Appendix IX; also section below on trade abroad). What seems to be a heeled version of the style is also used by Llewellin Evans, though unfortunately the versions seen by this writer are those illustrated in the Port Royal reports (Oswald 1968; 1969), where many of the drawings submitted to Oswald and reproduced in the reports are too inaccurate to be reproduced in Appendix IX here.

All this is not to say that the Hunt "chinned" style was shunned by other Bristol makers. It was used, among the other shapes noted above, by Philip Edwards sr (figs d-f; also Pritchard 1923: pl IV,15-17, p.176), by Richard Nunney (fig a), and by Francis Edwards I (fig a); and its influence on later Bristol pipes is unmistakable, for example on products of Richard Nunney (figs g and h), Llewellin Evans (figs b, c, f, and g), one of the William Evanses (fig a), Robert Tippet I (figs c-e and g-k), and Francis Edwards I (figs c and d). Further, as will be discussed in detail later, the Robert Tippet sequence of pipes shown in figs c-e and g-p (FIG 156) indicates the chinned style contributed to the development of the other famous Bristol and West Country pipe style, the gracefully curved bowl in the Oswald type 9 series which is so commonly found in North America because of Bristol exports there (cf also the sequence shown in Atkinson 1965c: 89 fig 1,K-P and 91 fig 2,Q-V; FIG 157 here). Indeed, the sequence discernible among the large amount of Taunton-made material in the Somerset County Museum at Taunton indicates the chinned style also contributed to the evolution of what may be called the South-West style, in Oswald's type 10 series, which was produced in the C18 at centres in the South-West such as Taunton and Barnstaple and was quite different from the type 9 style used in Bristol, Wiltshire, and Hampshire.

The point, however, is that what one sees of the chinned style in Bristol products of the second half of the C17 is a general influence rather than a complete take-over. Few of the examples of Bristol-made pipes cited above as showing this influence would be confused with the true chinned style as represented by the products of John and Flower Hunt. Further, when one removes from Pritchard's illustrations the products of Jeffry Hunt, for whom there is no evidence that he ever worked in Bristol, and the products of John and Nathaniel Howell (Pritchard 1923: pl VIII,108-10, pp186-7) for whom equally there is no evidence of their being Bristolians,[54] one reduces sharply the number of true chinned pipes attributable to Bristol makers. It seems reasonable to conclude, therefore, that the chinned type comes to Bristol from elsewhere, probably with the Hunts and presumably from Wiltshire.

If one is to look further for the origin of the chinned style, and with it perhaps a possible origin for the elusive Hunt family, one may consider the famous Gauntlett pipemaking family of Amesbury, ca.8 miles north of Salisbury, which has already been described in 3: I. The fame of this family's products was such that their mark of a gauntlet on the heel of the pipe was widely plagiarized, but the best examples seen by this writer -

which are beautifully made and finely burnished - belong to this chinned class and typologically should date to the 1640s or earlier (cf Atkinson 1965c: 86, rev ed 1969b). As indicated in 3: I, Gauntlett pipes were already famous enough in 1641 or 1642 for the family to be supplying the Marquis of Hertford, and one must suppose the business had started before 1640. Indeed, there is some evidence to suggest the family may conceivably have been making pipes as early as ca.1600 or earlier and in a form which might be an ultimate prototype of the chinned bowl (Oswald 1969c: 204 fig 3(17); Atkinson and Oswald 1969: 192, 193 fig 8,57; cf Atkinson 1973: 154).

As a hypothesis, this writer suggests that the Hunts may have been trained by, or at least had worked close enough to be influenced by, the Gauntlett family. This would explain the similarity of bowl shape, the similar high quality of workmanship and the similar beautiful polished "glazed" finish. It would also explain why John and Flower could afford a £5 fine and be regarded by the Brisol fathers as worth fining that amount, and it would explain their bringing with them moulds which produced these chinned style pipes. If at least some of the Hunts had been working on their own before ca.1650 this would explain Thomas Hunt pipes typologically datable as early as ca.1640 (Atkinson 1965c: 86, rev ed 1969b); it would also explain why there is such a wide distribution of John Hunt pipes when John Hunt may not have worked very long in Bristol (see above). The suggestion is, then, that the Hunts may have originally come from south Wiltshire.

(The suggestion that at least Jeffry Hunt came from Norton St Philip in north Somerset ca.6 miles SSE of Bath (e.g. Pritchard 1923: 178; Atkinson 1965c: 90, rev ed 1969b) originates with an anonymous letter appearing in the 10 March 1855 issue of N&Q (pp192-3) in answer to a letter of 13 January inquiring about Jeffry Hunt pipes. The contributor noted that Jeffry Hunt pipes were common in Somerset and that in Norton St Philip church there was a gravestone in the north aisle to an Edward Hunt, son of Jeffrey, dated 1656. The same writer also noted a Jeffrey Hunt appearing in 1665 in a rate book of the parish. Unfortunately Pritchard, when repeating this, does not note his source and as a result appears to indicate the 1665 reference occurs in a Bristol rate book. He then goes on to say that the "registers" show the death of a Jeffry Hunt in 1690 aged 91, but what registers is not stated - this reference is not given in the N&Q letter. Pritchard also noted that Hunt pipes had been found particularly frequently in the Pithay district of Bristol in the old rubbish pits just outside the Norman wall, and under C18 houses in Wellington St, and suggested it was here the Hunts worked, as pipes with all four Hunt names - John, Flower, Thomas, and Jeffry - had been found there (Pritchard 1923: 177). Unfortunately, Pritchard's references are confusing, for he implies that Wellington St and the Pithay are near each other, whereas the Wellington St he must have meant was a now-vanished street running west from Somerset St in the Cathay area of the city, north of the New Cut and SE of St Mary Redcliff Church - the street was in fact being cleared in 1923, the year Pritchard wrote (I am indebted to Bristol Public Libraries for information on this point). Thus Wellington St was ca.3-3/4 miles away from the Pithay and on the opposite side of the then line of the Avon and actually outside the old city boundary. The

Pithay, however, was indeed on the line of the early city wall. Whether Pritchard was suggesting the Hunts worked in the Pithay area or the Wellington St area is thus not clear.

Returning to Philip Edwardses pipes found outside Bristol, Philip Edwards sr became free 1649/50, was still alive 1668/9, but had died by 1683; his son Philip jr was apprenticed to his father 1668/9, took his freedom 1680/1, and was still alive 1696. Their pipes occur in collections at Stroud (from Arlington Court NE of Cirencester), Gloucester (from the city itself [55]), Abergavenny (three examples), St Fagans (two examples), and Taunton (the Downside district[56]), as well as from the Ross-on-Wye area (two examples) and from the Department of the Environment work at Raglan (three examples). Oswald (in litt. 1 December 1970) notes a pipe of one of the Philip Edwardses at Ludlow Museum in Shropshire (FIG 150). It is difficult to separate the products of the two Edwardses with any certainty, but the Gloucester example and one each of the Abergavenny and St Fagans examples are probably products of Philip sr; the Ross-on-Wye example and the three from Raglan Castle are too fragmentary for further identification but the remainder are probably products of Philip jr. In fact, as will be discussed in detail in Sub-section (c) below, the Raglan Castle examples are on historical grounds almost certainly the products of Philip sr. In addition, a heel-fragment from Ross-on-Wye bears the mark ED/WAR/DS: although there are a number of Edwardses pipemakers in Bristol from the mid-C17 to the first quarter of the C19 this form of marking would date the fragment to the third quarter or so of the C17, and Pritchard is probably right when he ascribes this mark to Philip sr on the shape of a whole example found in Bristol (Pritchard 1923: 176 and pl IV,17). Entirely outside this distribution pattern is a possible Philip Edwards pipe from the River Witham at Boston (P.K. Wells in litt. 26 January 1974). The bowl-shape certainly belongs to the West Country "chinned" class but the PE on the heel is encircled with dots and there are additional dots above and below the letters, and a very marked characteristic of Philip Edwards pipes is their spartan simplicity of marking. If this is a Philip Edwards product, the bowl shape would date it to Philip sr.

Pipes identifiable as products of Richard Nunney (F 1655, fl 1696, D by 1713) occur in the collections at Stroud (two examples, one from Arlington Court NE of Cirencester and one from Leonard Stanley west of Stroud), Birmingham (from near Bradford-on-Avon, Wiltshire), Cardiff (from excavations at Caerleon near Newport, see J.M. Lewis 1967: 155-6), St Fagans, and Taunton (two examples, one from Stogursey NW of Bridgwater and one from Cheddar),[57] and examples are also known from as far away as London and Nottingham (Oswald in litt. 1 December 1970; also Atkinson 1965a: 251 fig 5,77 and 256 additional note for London occurrence) (FIG 150).

The next Bristol pipemaker whose products can be identified outside Bristol is Robert Tippet I (F 1660, fl 1680, D by 1687). The only example from outside Bristol found by this writer is one at St Fagans (from Cardiff), but one from London is noted by Price 1900: 232-3, fig 11a), and Oswald (in litt. 1 December 1970) notes possible examples at Winchester and Cambridge. The Robert Tippet family was probably the most famous Bristol pipemaking family, though there is relatively little documentary evidence for them, particularly in their third generation. They built up a massive export trade with North America, their pipes being found from Newfoundland to Jamaica and in more quantity than most of the other Bristol exporters put together; this part of their business is discussed in detail in the following section, but here it may be noted that the rarity of Tippet pipes found in England and Wales (and the apparent total lack of second- and third-generation Tippet products) suggests an almost exclusive concentration on the oversea trade.

A contemporary of Robert Tippet I is *Edward Battle* (A 1651, F 1660, fl 1669), and a pipe bowl which is probably his is in the collections at Abergavenny (fig *a*). This example is of a definitely Bristol bowl form probably datable to the 1670s and noted on p.602 above as being used by such makers as Nunney, one or both of the Philip Edwardses, and whoever used the impressed initials WC; the mark is a fairly simple one, raised from a depressed background. Unfortunately, no definitely-identifiable Battle products have been found in the Bristol collections. Pritchard (1923: 180, pl V,38) illustrates one possibility, with an elaborate mark raised from a depressed background, though its shape seems rather early for Battle's dates (Pritchard erroneously says (1923: 180) Battle became free in 1650); but there is a very similar bowl in the Bristol City Museum collections (fig *b*) with a mark quite similar to that on the Abergavenny specimen. In the Blaise Castle Folk Museum at Bristol there is a bowl (fig *c*) rather similar in shape to the Abergavenny specimen but with an elaborate *impressed* mark. The letters EB raised from a depressed background and surmounted by a poorly-made fleur-de-lis also occur on a chinned bowl of about the mid-C17 found at Marlborough (fig *d*) (A.H. Macdonald 1941: pl V,e and 5). The Abergavenny example, as stated above, is definitely of a Bristol bowl shape and is, in the opinioin of this writer, probably a Battle product; whether the other specimens are is less certain, though known possible alternative makers with these initials at this time are rare, Oswald (1960a: 57) listing only one other, Edward Biggs fl 1653, of Henley-in-Arden in Warwickshire. At a guess the EB-marked pipe at Warwick (fig *e*) should be his.

EB-marked pipes, suggested by Oswald as Battle products (quoted in McBride, Larn, and Davis 1972a: 78 and 1972b: 139), have recently been recovered from a wreck near Mullion Cove, on the Lizard, Cornwall; unfortunately, though it is stated that a number of bowls were found, they are not illustrated, and the mark - the letters EB inside a circle (presumably on the heel, but whether impressed or raised is not stated) (McBride, Larn, and Davis 1972b: 142 fig 11) - does not parallel closely any of those noted above. On the other hand, it does closely resemble a raised EB heel-mark on a bowlless fragment from the Townsend site near Lewes in Delaware (Omwake 1963: pl 11B,3) which *could* be Dutch, though frustratingly both Dutch and Bristol pipes occur on the site (this material is discussed on p.669 below). The Mullion Cove ship has unfortunately not yet been identified, but a mid-C17 date seems definite, and of the two most likely identifications neither is English, one being a Genoese ship lost in 1667 and the other, more likely, a ship variously described as French, Danish, Hamburg, or Dutch carrying a French cargo which went down in 1669. The latter ship in any of its alleged nationalities would have been more likely to have had Dutch pipes on board (obviously so, if it were indeed a Dutch ship) than English, and as is discussed in more detail on pp668-72 below, the Dutch were producing EB-marked pipes by 1664 and were certainly exporting them to North America. The lack of certainty as to Battle's products is the more regretable because EB-marked pipes occur relatively frequently in North America in second-half-of-the-C17 contexts, and with the exception of a few certain and some possible Dutch examples, it has not proved possible so far to identify most of these finds as either English or Dutch, though the extensive Bristol oversea trade in pipes by this time makes it reasonable to suppose that Battle could have exported as did a number of his contemporaries (EB-marked pipes in North America are discussed on pp 668-72 below).

Another contemporary of Robert Tippet I is Llewellin Evans (prob. A 1654, F 1661, fl 1684, D by 1688/9). Like many Bristol pipemakers from about this time onwards, Llewellin Evans is much better known from his North American export trade than from his home trade, and in fact outside Bristol only one home example of his products has been recorded, a stem-fragment from Marlborough (Atkinson 1973: 151, 150 fig 1,34).

At Gloucester there is a stem-fragment with decoration of a pattern which appears to be restricted to certain Bristol makers, including Llewellin Evans. This decoration comprises a band of continuous impressed diamonds, sometimes with a raised dot inside, round the stem, bounded above and below by two dashed lines. Frequently the row of diamonds is interrupted by the initials or name of the makers using this decoration; in the case of the Gloucester example, there is no such identification, but the marking is known to have been used at most by only about half-a-dozen Bristol makers and so far as is known by no others elsewhere. These makers are:

Llewellin Evans (prob. A 1654, F 1661, fl 1684, D by 1688/9; fig d);
one or both of the William Evanses (one A 1653 F 1660, the other A 1660 F 1667, both fl 1682 and at least one fl 1697; figs g and h);
an uncertain maker, possibly (see below) John Sinderling (A 1653, F 1668, fl 1696, D by 1699 - prob. in the autumn of 1699);
probably Robert Tippet I (F 1660, fl 1680, D by 1687) - stems with this decoration and his initials are known from two sites in Virginia (see below, section on trade abroad).

Exactly the same type of decoration - a row of diamonds impressed between two pairs of dashed lines - with the initials IP is known from the Salisbury site in New Jersey and Port Royal, Jamaica (see section on trade abroad). No stems with these initials are known from Bristol, though it is difficult to believe they do not have some connection with a Bristol maker. There are a relatively large number of Bristol makers with these initials but three would fit the ca.1650-80 period suggested by the occurrence of John Fox and Llewellin Evans pipes at the Salisbury site. They are:

Jacob Prosser - A 1655, F 1662/3, fl 1680;
John Prosser - F 1673;
John Poyte sr - F 1680, fl 1715.

None of these has any known connection with the Bristol makers definitely known to have used this form of marking, however, and the attribution of these IP stems to Bristol must remain conjectural until examples are found in Bristol.

A site at Pemaquid in Maine has also produced pipes with his form of decoration and the initials RS (Mrs H. Camp *in litt.* 27 July 1966; H. Camp: 11 fig 5 fifth line): no such examples are known from Bristol, though two Bristol makers might be responsible (see below). A possible variant of the decoration may involve the use of solid lines instead of dashed ones - one such example with the letters IS is known from the same Maine site; however, the denticulated blade used to make this mark may merely have slipped. This site has also produced a stem with these lines and the initials DL, which latter do not correspond with those of any known Bristol maker.

The second William Evans is possibly a brother of Llewellin, and Llewellin probably evolved his mark from a rather similar one attributable to his master James Fox; the letters IF with the cross on either side raised from a depressed band on the top of the stem (fig *b*). This second William Evans finished his apprenticeship with Robert Tippet I, so a link can be established among these four makers who used this form of marking.[58]

Who the maker using this motif and the initials IS was is uncertain. It occurs at Bristol (on a pipe from the city) with a bowl datable on the evidence of similar bowls with known makers' names to ca.1690-1720, and there is another bowl of the same form with the same decoration on its stem except that the initials have been omitted. Unfortunately, this time-span covers parts of the working lives of at least five Bristol pipemakers with the initials IS, none of whom has any known connection with the five names noted above. The five with the initials IS are as follows (in chronological order):

John Sinderling - A 1653, F 1668, fl 1696, D by 1699 (prob. in the autumn of 1699);
James Silcocks - A 1670, F 1679/80;
Joseph Stanford sr - A 1683, F 1691, fl 1722;
John Squibb - F 1704/05, fl 1734;
James Stephens - A 1708, F 1715/6, fl 1722.

Of these, Sinderling and Squibb were certainly active pipemakers to judge by the number of apprentices they took; the others may have spent most or all of their careers as journeymen. At a guess, therefore, the maker was either Sinderling or Squibb. (As noted below when dealing with trade abroad these IS-decorated stems have been found in Rhode Island and Maine, and as is discussed at that point the context of the Rhode Island find suggests Sinderling is more likely to have been the maker.)

If the RS-marked stems are in fact Bristol-produced they presumably must have been produced by either *Robert Sheppard* (A 1660, F 1669, fl 1690) or *Richard Saunders* (A 1677, F 1685, fl 1715), the only two makers with these initials known during the second half of the C17. Saunders appears never to have taken apprentices, so possibly worked as a journeyman, in which case he is unlikely to have marked his products; Sheppard on the other hand appears to have run a business of his own. Neither appears to have had any connection with those noted above who definitely used this form of decoration as their marking.

James Fox, Llewellin Evans's master, was noted above as using a mark rather similar to those just described which was probably the inspiration for the motif used by the other makers: an example of this mark has recently been found from the Thames in London (Atkinson *in litt.* 20 May 1972). The mark attributed to Fox has not been found in Bristol collections, but has been recorded on a number of fragments from several North American sites (see below, trade abroad). Fox was probably apprenticed 1639/40; he was working by 1651 though he did not take his freedom until 1654, and is last recorded in 1668/9. This raises a problem, because when bowls have been found attached to these stems their shape suggests a 1670s or 1680s date, some ten years later than Fox's last recorded date. In fact, none of the bowls found attached to these stems in North America have had their top part surviving, which made precise dating difficult; the value of the probable Fox pipe from London is that the bowl is entire (fig a), and its shape certainly confirms the dating suggested above, if not indeed suggesting a slightly later span, say 1680s-1690s. The lack of definite references to Fox after 1668/9 when he and his wife Jane took an apprentice is therefore the more puzzling, though a list of Bristol inhabitants in 1696 does note a James and "Genett" (Janet) Fox in St Nicholas parish but with no occupation given.

As noted earlier, Atkinson (1962a: 184, 183 fig 1.13 and f) records a John Hunt pipe from London which, though it has the conventional IOH/N·HV/NT mark associated with the mid-C17 John Hunt chinned bowls, has a bowl definitely later in shape, approaching the early class 9 shape. If this is a product of the John Hunt of Bristol F 1651 fl 1653 it is appreciably later than either his dates or his other products known to this writer, and it may be a product of one or other of the two John Hunts of Bristol, both sons of Flower Hunt, who were working at the end of the C17 and into the C18. One of these became free 1689, the other was apprenticed 1685/6 and took his freedom 1694, and at least one of them was working in 1715 and possibly in 1716/7; the bowl shape depicted by Atkinson, however, is earlier than the bowl shapes (figs a and b) definitely attributable to either of these two makers, and would fit more happily a 1670s-80s context.

When studying pipes in the North-East, Parsons (1964: 238, 239 fig 2,23-28) noted West Country material appearing in the area during the period 1630-70, but in this writer's view the amount of this material is exaggerated. Of the six bowl forms Parsons claims to be from the West Country only three - nos 25, 26, and probably 27 - seem to this writer to be typical West Country forms, and the only West Country maker identified by mark by Parsons is Thomas Hunt, wrongly ascribed to Bristol instead of Marlborough. Further, the suggested date of ca.1630 for these pipes reaching the North-East seems very early. One would like to see definitely-attributable early Bristol pipes, such as Berryman or Edward Lewis products, before commiting oneself to such a date; and one would like to see definitely-identified later Bristol material before accepting Bristol trade that far in England as definite (it seems to be accepted, for example, in Belcher and Jarrett 1972: 191, 193). Nevertheless, the Thomas Hunt pipes do indicate West Country pipes reaching the North-East in the second half of the C17, and there must be some explanation in terms of trade links for Hunt pipes to occur so unexpectedly far from their place of origin: possibly North-East coal came up the Thames far enough to enter Hunt's extensive territory (see above pp894-5) and perhaps some West Country makers were persuaded to come to new opportunities in the North-East as John and Flower Hunt appear to have been persuaded to help set up the newly-organized Bristol industry in 1652 (p.901 above).

That Bristol pipes were known by reputation in the North-West (where so far virtually nothing is known about local pipemaking industries), if not actually used there, by the late C17 is suggestd by a reference in a letter of 1697/8 relating to plans to set up a pipemaking and potting industry on the Lowther estates at Whitehaven in Cumberland (quoted in Weatherill and Edwards 1972: 163). The initial attempt to produce satisfactory pipes met with indifferent success as the clay used - from a local scurce - tended to fire red, but by apparently using another local clay and overcoming in an unspecified way (perhaps by sealing the saggars or using a muffle-kiln - cf 2: VII) the effect of the coal fuel used for firing, it was triumphantly recorded on 18 January 1697/8 that "Our last kill-full burnt to a degree of whiteness nothing short of y^{e} Bristol pipes, and we think in other respects (especially in y^{t} of enduring the fire w^{n} re-burnt) to exceed them". This clearly indicates Bristol pipes were held to be of superior quality. It is possible that Bristol pipes were used at Whitehaven, which like Bristol was a port engaged in the tobacco-trade (see remarks in 4: IV); however, the reason for the attempts to produce pipes and pottery at Whitehaven was probably to have a local industry which could profit from the tobacco-trade with Virginia in which Whitehaven was involved in an increasing amount (Weatherill and Edwards 1972: 166), so the comparison of Whitehaven pipes with those of Bristol may simply have been with products known to be sold in the American colonies in large quantities from a centre specializing (see below, trade abroad) in exporting pipes there.

From the second half of the C17 onwards the number of identifiable Bristol pipes found in England declines, in sharp contrast to the number found abroad in the later C17 and earlier C18 and described in the following Sub-section. The pipes of the Philip Edwardses, of Richard Nunney, of Robert Tippet I, and the examples probably belonging to Edward Battle and to the Evanses all noted above date to the period ca.1650-80; after that, very little Bristol material occurs in England outside Bristol itself until the C19, despite the fact that the period ca.1690-1740 saw the height of the Bristol pipemaking industry.

Scattered material representing several makers working in Bristol in the early C18 does occur, however. A bowl with the cartouche of Isaac Evans (son of one of the William Evanses noted above, listed with father 1696, F 1698, fl 1700/1) occurs at Gloucester. This example is unusual in that the bowl, which is of the gracefully-curved Oswald type 9 style, is criss-crossed with denticulated lines which must have been applied with the saw-blade edged knife normally used to put this ornamentation on the rim of the bowl. The surviving stem attached to this bowl is also unusual in having, unfortunately just where the rest of the stem is broken off, a "collar", or more properly a raised moulding of clay: what this was is uncertain, but it does not appear to be for the attachment of a stem of different material for the normal narrow bore of the stem appears to have continued into the broken-off part, and it may simply have been ornamental. Nothing similar is known among Evans's material found in Bristol nor in North America. To judge from examples of Isaac Evans pipes with RT impressed on the bowl facing the smoker some of which are typologically early, Evans worked in partnership or perhaps as a sub-contractor for Robert

Tippet enterprises intially; and Evans pipes similarly marked ER suggest he also worked for or with either Edward Randall jr or Edward Reed (see below) at some time. Products bearing no second mark, such as the Gloucester specimen, tend to by typologically later than the others, and one suspects he was producing appreciably later than his last recorded date of 1700/1, perhaps into the 1720s.[59]

Mention was made in the preceding paragraph of the ER mark being attributable to either Edward Randall jr or Edward Reed. *Edward Reed* (A 1699, F 1706, Master of the Company 1715, fl 1723, poss. fl 1735) apparently used as his standard mark his name in a cartouche on the right side of the bowl in what was a standard Bristol form of marking during this period: he also, however, sometimes added his initials impressed on the bowl facing the smoker, a common additional method of marking pipes in Bristol at this time,[60] and the problem is whether pipes bearing these initials ER *without* the Reed cartouche are to be regarded as his or the possible products of his contemporary Edward *Randall jr* (A 1689, F 1699). The problem is also discussed in the section on trade abroad, as ER-marked pipes have been found on a number of North American sites. Within the area of England and Wales where museum material was studied by this writer one Edward Reed pipe, with a cartouche inscribed E/REED/*, was noted at Tenby (from Caldy Island 2 1/2 miles south of Tenby); while a bowl marked ER facing the smoker and an illegible cartouche on the right side (fig *a*) is at the Royal Institution of South Wales at Swansea (from Cherriton 13 miles west of Swansea in the Gower peninsula). This latter bowl is of an early type 9 form showing the influence of the Hunt shape, and on typological grounds could be somewhat earlier than Reed's dates; the cartouche need not necessarily be Reed's, for pipes marked ER facing the smoker with a cartouche enclosing the marks of Isaac Evans (above), Henry Edwards (A 1689, F 1699, fl 1727), and the letters IR, T, and ER are all known from Port Royal, Jamaica, see Oswald 1968: *passim* and 1969 *passim*). Whatever the identification, however, this example can be assumed to be a Bristol product (for futher discussion see following section on trade abroad).

It has been suggested (Oswald 1960a: 48; repeated by I. Walker 1971c: 80-1; Atkinson and Oswald 1969: 186) that Edward Randall jr is the Edward Randall noted in 1719 taking an apprentice in London. The evidence for this, however, appears to lie in the same name occurring in the two centres at approximately the same time. In fact, nothing is known about Randall in Bristol after he took his freedom; no apprentices are recorded being taken by him nor does he appear in any of the poll books. If he is responsible for some the ER-marked pipes noted in the New World, pehaps in the capacity of a journeyman with Isaac Evans or Henry Edwards, for example, he must have stayed a few years into the C18 in Bristol (as a journeyman he would not be taking apprentices, hence would not be noted in the apprentice rolls); but London material attributed to him (Atkinson and Oswald 1969: 187 fig 5,23-5) includes one bowl (no 23) which cannot be later than ca.1700 at the latest, suggesting that if the Bristol Randall is the maker he cannot have remained long in Bristol and did not apparently take Bristol moulds with him when he left. Later bowls attributed to him *loc. cit.* (nos 24-5) are datable to ca.1720-50 and are of typical enough London-Home Counties type 9 forms, though the second appears to be of a later type. These latter two examples have E and R moulded on either side of the heel in typical London fashion and the same letters with some scroll-work and surrounded by a circle impressed on the bowl facing the smoker, which if less characteristic of London makers is certainly not a Bristol feature of the C18 unless it be considered a very florid development of the chastely stamped initials very common in that position on Bristol products or a throwback to some C17 Bristol marks, for example Llewellin or the William Evanses. The early bowl (no 23) has a simple ER on the heel, and really looks definitely earlier than Randall jr's dates. In this writer's opinion, a connection between the Bristol and London Edward Randalls has not been demonstrated by these bowls, nor is there any historical evidence known at present to substantiate the suggestion.

Oswald (in litt. 1 December 1970) notes pipes with the cartouche of John Macey at Gloucester and in the Thomson Collection at Nottingham probably coming from London. There were two John Maceys pipemakers in Bristol, father and son - John sr A 1691 F 1700 fl 1726 and John jr F 1723, one of them fl 1729 and D by 1738. The shape of bowl illustrated by Oswald is an early type 9 similar to some of those produced by Isaac Evans and Robert Tippet II (see above) which must date to ca.1700; this would very strongly indicate these products, assuming they were all of this shape, are those of the elder John Macey.

A bowl of type 9 shape with the letters TO impressed facing the smoker at Taunton is a product of one of three Thomas Owens pipemakers in Bristol during the first three or so decades of the C18. The first, Thomas sr, was apprenticed 1688/9, became free 1698 (though he is noted as a pipemaker two years earlier) and was dead by 1725; the second, his son Thomas jr, took his freedom in 1725; and the third Thomas, who was not a direct relation of the others, became free 1727. Either the second or third Thomas was still working in 1739.

A pipe made by either James or John Jenkins - more likely the former - pipemakers in Bristol about this time, occurs at Salisbury (Oswald 1959a: 60, 61 fig 4,B) and there is a possible example at Wookey Hole (the cartouche on the latter specimen is too blurred to provide a definite reading). James Jenkins became free 1707 and was still working 1739; his son John became free 1739 (the Jenkins cartouche, which occurs at Port Royal, Jamaica - see next section - reads I/IENK/INS, which makes it impossible to say whether James or John was the maker, but James seems more likely in view of the bowl style unless John was using some very old family moulds; the bowl style is too early for Joseph Jenkins F 1768 fl 1784).

A bowl of early West Country type 8 shape with IOHN/ABBOTT in a cartouche is noted at Warwick (Oswald in litt. 1 December 1970; not seen there by this writer). The only John Abbot(t) pipemaker known at present in England is the one in Bristol free 1651 and a guild founder-member the following year who was still working 1681 but was possibly dead by 1696: as is discussed below when considering dating evidence for the first appearance of West Country type 9 bowl forms, these forms were probably appearing there from the 1680s, so it is possible this pipe is a late product of John Abbot of Bristol. (As is noted below when discussing the oversea trade a John Abbot pipe is known from Jamestown, Virginia: it is marked IOH/NABB/OT but unfortunately it is not stated whether this is on the heel, as with the Hunt pipes, or in a cartouche on the side of the bowl - in view of Abbot's dates it could have been either.)

At Gloucester there is a West Country type 9 bowl with the letters CH facing the smoker. This form of marking, as noted above, is very common among Bristol makers in the first several decades of the C18, and while definite evidence for its identification, for example similar finds in Bristol, is lacking it is possible it is a product of Charles Hickes A 1714, F 1721/2, fl 1740, D by 1747? - certainly no other Bristol maker with these initials fits the period indicated by the bowl form. Similarly-marked pipes come from a site in Maine, one example at least appearing in a first-half-of-the-C18 context and another from Port Royal, Jamaica (Oswald 1968: 43 no 80, repeated in 1969: 31 no 59) (see below, section on trade abroad).

Finally, there is at Coventry a West Country type 9 bowl from the city with the letters GE in a cartouche on the right side in typical Bristol fashion. Bowls with this mark are known from Bristol and can plausibly be attributed to George Ebbery (F 1721, fl 1781). Because Ebbery was active over such a long period and not enough of his products are known from which a typological development might be deduced, this find cannot be closely dated, but the bowl form should belong to the earlier C18 and the balance of other evidence would certainly suggest it had reached Coventry via the Severn basin trade earlier rather than later in the C18.

The survey of identifiable Bristol material datable to the first two or three decades of the C18 in the preceding paragraphs does not exhaust the variety of type 9 bowls with or without the maker's mark in a cartouche on the side or impressed facing the smoker found in the museums or literature covered. However, it does cover all the material which this writer is prepared to put forward as definitely or probably Bristol in origin. That other Bristol material of this period was traded over the area is very likely, but as with the C17 material dealt with earlier, uncertain material has been avoided as much as possible.

In particular, just as it has been stressed that the Hunt-style chinned bowls of the mid- and later C17 are not an exclusively Bristol type, and indeed probably did not originate there and were less common there than other forms, it must also be pointed out that the type 9 style associated especially with the Robert Tippet family's products is equally not a purely Bristol style. This graceful type 9 shape is equally standard in Wiltshire from the 1680s as Atkinson has shown (1965c: 90-3, fig 2, rev ed 1969b; 1971: 181, 182-3, fig 2). The use of a cartouche on the side of the bowl (almost invariably the right side) and/or the use of letters impressed on the bowl facing the smoker does seem to have been a Bristol characteristic, for Wiltshire makers of this period invariably appear to have impressed their names on the top of the stem within an inch or so of the bowl (Atkinson loc. cit.), but even so cartouches do not appear to be exclusively Bristol. A maker P. Andrs (sic) produced pipes with P./AND/RS in a cartouche and probably those with PA in a cartouche as well during this period, but he is not a Bristol maker; a PA-cartouche pipe, incidentally, is known from an early or mid-C18 Colonial site on Nantucket Island, Massachusetts, together with two other pipes with "similar but industinguishable maker's marks" (Bullen and Brooks 1949: 87, fig 20 upper rt; better photograph in Oswald 1959a: 60, fig 3,b) and others have been found at Pemaquid, Maine (Mrs H. Camp in litt. 27 July 1966, seen by writer November 1972). This maker's place of work is unknown, but he may have been a relative of Roger Andrus of Claverton near Bath apprenticed in Marlborough in 1718 and producing pipes there during the period ca.1725-30 bearing his name in the standard Wiltshire manner (Atkinson 1965c: 90-2, fig 2,97-8, rev ed 1969b).)[61]

Bearing this in mind, therefore, it seems better not to attempt to list various possible identifications but to assume the foregoing examples represent a random but reasonably-accurate cross-section of what Bristol trade in pipes there was in England and Wales at this period.

At the beginning of this study (1: II(a)) it was noted that light might be shed on the origins of Oswald's type 9 bowl-shapes as the study progressed, for it seemed possible the type might have started in Bristol or the West Country. An explanation which entirely satisfies all aspects of the problem is still lacking, but as noted above a development of the type 9 style at least in the West Country from the earlier West Country chinned style is plausible.

In describing his class 9 bowls, Oswald noted (1961: 60) they occurred in England principally in two areas: London and the Home Counties, and the West Country. With the increased study of pipes since that time it can now be seen there are distinctively London-Home Counties and West Country versions of this type. The former comprises those depicted by Atkinson and Oswald (1969: 180 fig 2,25-8) for London, by Atkinson (1964a: illus. facing p.73 nos 9-14) for Sussex, by Tilley (1971: 173 no 12, 174) for the Gravesend area of Kent, and the products of an C18 pipemaker's waster dump at Guildford in Surrey (Kingsford-Curram 1968: 88 fig 1). The latter are typified by the later Robert Tippet products, the later Thomas Owen pipes, and those of many other Bristol makers such as Isaac Evans and Edward Reed, with the maker's name typically in a cartouche moulded on the bowl side; by standard Wiltshire products of this time as shown by Atkinson at Marlborough (1965c: 91 fig 2,Q-V, rev ed 1969b; 1973) and Salisbury (1971: 182 fig 2,15-23; 1973); and by pipes produced in Hampshire (Atkinson 1970a: 186, 182 fig 71,95; 1972b: 74 fig 32,6-7; material seen by this writer in Southampton and Winchester museums), both of which latter groups characteristically have the maker's name stamped in two or three lines, frequently within a circular surround, on the top of the stem towards the bowl. This latter form of marking is used by makers as close to Bristol as Bath (Owen 1967: 53, 54 fig 2,22; Atkinson 1971: 186; Brown and Sneddon 1973: 295) and in the opposite direction spread as far as Chichester in SW Sussex (Atkinson 1970b: 159, 160) and Guildford in west Surrey (Atkinson 1968: 14); and as noted below, what appears to be a local version of this form using a symbol instead of a name has been found on pipes excavated at Poole in SE Dorset - a possible example of this latter variant is the two-headed eagle, the arms of the city of New Sarum, found in this position on the stems of pipes at Salisbury (Atkinson 1973: 151, 150 fig 1,15).

In other directions the West Country type 9 style, predominantly with the Wiltshire-Hampshire form of marking the maker's name, extends west and

SW into east Somerset and Dorset. At Shaftesbury in north Dorset examples occur but type 10 pipes of the Taunton-South West variety are absent, and at Dorchester in south Dorset a few type 10 bowls occur but more so type 9, of which there appear to be local derivatives (cf Atkinson 1970c: passim; E. Watkins 1966: passim). To the north, at least one Oxfordshire pipemaker, Benjamin Abbott whom Oswald notes working at Ramsden in the western part of the county in 1758 (Oswald 1960a: 55; 1970b: pl 213, p.244), was using a typical West Country bowl form of the early C18 (bowl with marked stem at Filkins and Broughton Poggs Museum, Oxfordshire - Abbott used a Broseley-style stem-mark; for a discussion of this see the following sub-section).

That these two varieties of type 9 overlap in distribution and therefore, as they are broadly contemporaneous, may have influenced each other, is indicated by West Country examples being found in London (Atkinson and Oswald 1969: 180 fig 2,23) and Sussex (Atkinson 1964a: illus. facing p.73 no 8). With the area producing West Country type 9 bowls extending as far east as Hampshire, one probable route by which this bowl style could have reached London would be through north Hampshire; another route east, particularly suited for contacts with Sussex, would be the coastal trade from Southampton and Portsmouth (for an example of this see below). Indeed, as Atkinson notes (1972b: 75), Hampshire in the C17 because of its geographical position typically did show an overlap in pipes from the Home Counties and those from the West Country. Thomas Hunt pipes from Marlborough have occurred in south and east Hampshire (Atkinson 1965c: 93, rev ed 1969b), London (T.G.H. Price 1900: 234, 235 fig 16; Atkinson 1962a: 184, 183 fig 1,14 and b), and indeed as far away as Durham (Parsons 1964: 238). Also known from London is an example of the similarly high-quality type 9 products of Richart Cutts (Atkinson 1962a: 186, 185 fig 2,45 and f) and a Richard Sayer-marked stem from Fulham (Atkinson in litt. 27 June 1974). Richard Cutts is probably the person of that name whose marriage in 1693 is recorded at East Woodhay, a noted pipemaking centre of the time ca.6 miles SW of Newbury in Hampshire (cf R.H. Cooper in Hampshire Chronicle 29 August 1964), though no occupation is specified in this reference (Atkinson 1965c: 92 and 95 n.14, 91 fig 2,V and 75, rev ed 1969b). As Atkinson notes, Cutts's pipes have also been found at Marlborough, Winchester, and Southampton, indicating he had a widespread market though his place of work is at present unknown. Richard Sayer-marked stems, though so far never found with the bowl attached, are similarly widespread in Wiltshire and Hampshire, have been recovered at Marlborough, Salisbury, Basing, and Winchester (Atkinson 1965c: 93, 91 fig 2,76, rev ed 1969b; 1971: 187 and 188 n.7) and Sayer appears to have been working ca.1680-ca.1720, though his place of work, like Cutts's, is also at present unknown. Products of a John Edmonds, probably the John Edmonds of Portsmouth noted in a 1751 reference though his occupation is not given, have been found at Portsmouth, inland at Bishops Waltham and Winchester, and along the coast as far east as Arundel (Atkinson 1966: 273, 274 fig 3; 1970a: 186, 182 fig 71,95-6) and as far west as Plymouth (Oswald 1970a: 132, 133 fig 55,32), the Arundel find indicating, as noted above, this bowl style reaching into Sussex. Atkinson's work on Portsmouth pipes (1969c) indicates that both West Country and London-Home Counties type 9 forms were being produced there in the earlier C18 (for distribution of these types see FIG 155).

An interesting situation appears to exist at Poole in SE Dorset. The vast majority of the earlier C18 pipes occuring in the extensive urban archaeology work now being undertaken in the town are of London type, having the London-Home Counties bowl form and the maker's initials on either side of the heel in the characteristic manner of London pipes of this time. There are a few West Country type 9 bowls with the Wiltshire-Hampshire tradition of placing the maker's name on the top of the stem, and even fewer of the south Dorset bowl shape derived from the West Country type 9 form and noted above as occurring at Dorchester ca.20 miles to the west. A study of Poole pipes has yet to be undertaken, though a useful survey of the Poole pipe and pipeclay industries has been begun by Cooksey (MS 1), and until this is done it would be premature to claim Poole as the western outpost of the London-Home Counties type 9 bowl form in the earlier C18 for it may be that the pipes of this type in Poole are direct imports from London and a result of the pipeclay trade between Poole and London; if this is so, however, it might imply there was little in the way of a local pipe-industry whereas while admittedly no pipes were shipped from Poole in the half-year ending Christmas 1749 (Willan 1938: 156, 1967 ed) there is evidence that at least in the late C17 Poole had a pipe industry of some importance, for Southampton was importing pipes from there in the year ending Christmas 1687 (Willan op. cit. 152) and records for Poole show that between Christmas 1690 and Christmas 1691 482 gross, 2 hogsheads, and 3 chests of pipes were shipped to Portsmouth (the largest receiver with 216 gross), Weymouth (the next largest), Plymouth, Cowes, and - surprisingly, but no doubt because pipeclay was also being sent there - as far away as Newcastle upon Tyne (Willan op. cit. 156) (a number of the Wiltshire-Hampshire style pipes from the Poole excavations have a symbol - e.g. a rose - on the top of the stem instead of the maker's name: this may possibly be a local style). (The Poole excavations material was examined by this writer October 1973; I am grateful to G. Dowdell for showing me his finds.)

As is discussed below, by the last quarter or so of the C18 the later London-Home Counties form of Oswald's type 9 was being adopted in Bristol by the later Okelys, the Samuel Richardses, Anna Viner, and - if decorated bowls with WN in a cartouche are the products of William Nicholas (see p.637 below) - his later products too. The Marlborough industry had apparently died out sometime in the middle of the C18 (Atkinson 1965c: 88, 94, rev ed 1969b), but at Salisbury, where the industry continued into the C19, London-style type 9 bowls were being produced by local makers from the second half of the C18 onwards (Atkinson 1971: 181, 182 fig 2,24-6, though Atkinson considers fig 2,25 to be different from similarly-shaped London and South-East bowls). At Portsmouth, Atkinson's work (1969c) suggests that the West Country type 9 style is ending ca.1760 while the London-Home Counties type 9 style continues past this date.

This is perhaps part of a general pattern in English pipemaking at this time, for derivatives of the London-Home Counties type 9, Oswald's types 11 (ca.1780-1850) and 12 (ca.1820-50), become a basic series of shapes for C19 bowls. Because of the scarcity of identifiable later C18 Bristol material, it is difficult to date the change in Bristol, but Robert Tippet-marked bowls from 1750-60 contexts in North America (see section on trade abroad) belong to the orthodox Bristol style, and though there are no documentary references known to the Robert Tippets after 1720 the family must have been in business for much longer. For example, there are at least 15 Robert Tippet-marked bowl-fragments from the 1969 season of excavations on an underwater wreck in the Baie des Chaleurs on the Quebec-New Brunswick border which must date to 1760: those examples complete enough to show bowl form indicate a smaller and rather more upright shape (fig z) than the classic form of the earlier C18, but still within the Bristol-West Country type 9 tradition. Two similarly-shaped but unmarked bowls came from a 1750-60 context at Louisbourg, Nova Scotia (I. Walker 1971c: 67 fig 8, 65-6, 75). Similarly-shaped Robert Tippet pipes, including one form verging on the London shape, were found at the Whitson St kiln site in Bristol, together with others datable typologically as early as the late C17 (Marochan and Reed n.d.).

If the London-Home Counties bowl noted above with the WN cartouche is in fact a William Nicholas product then it must date to the 1770s as the latest as Nicholas, who had already been in business for 45 years, last appears in the 1775 trade directory and if he did not die about that time he would probably have either retired or lost his business with the outbreak of the American Revolution. Certainly Anna Viner, who was working by 1775 and continued until 1805, was producing bowls of this shape; several were recovered from a New York state site datable to 1778-1812 (see section below on trade abroad). A date for the introduction of this style to Bristol of between 1760 and 1775 seems likely, herefore. About the beginning of the last quarter of the C18 too, the type 10 series, which had been current for much of the century and represents developments of pre-type 9 bowl shapes, is disappearing, Oswald (1961: 60) giving a terminal date of ca.1780. It is to the type 10 series, as noted earlier that the Taunton and South-West pipe styles belong.

The perplexing problem as to why no documentary references to the Robert Tippet family are known after 1720 when their pipes are so widely found in North America in contexts up to 1760 is compounded by a bowl from Bristol, which from its pristine condition appears never to have been smoked, of the same general shape and size as that in fig z except that it is heeled, but with quite elaborate floral and scroll decoration on the front and back of the bowl in addition to the R/TIP/PET cartouche, the circle of which has a watch-wheel decoration. As discussed in detail later (p.637), the occurrence of scroll decoration on probable William Nicholas pipes gives a terminus ante quem of the 1770s at the latest for the introduction into Bristol of this form of decoration (cf above), and there are references to bowls with this general form of decoration by ca.1770 (1: II(h)), but it is difficult to accept this Robert Tippet bowl as dating to before 1760 and it certainly could date much later.

More research is needed on the Robert Tippet family and its products, for it is difficult to avoid contemplating the possibility that Robert Tippet-marked pipes may latterly have been produced by some other Bristol maker after the Robert Tippet family had either died out or stopped pipemaking. The obviously lucrative New World market enjoyed by the Robert Tippets would certainly have been an incentive to Bristol makers to have continued it if possible: it is conceivable the Robert Tippets could have sold the name and goodwill of their firm to another maker. If so, it seems unlikely they were acquired by the Robert Tippets' younger cousins, the William Tippets (William I was a younger brother of Robert II), for the last reference to a William Tippet is in 1739; John Tippet II was still alive in 1754 though he had died by 1766, but he was apparently not a close relative (if he was indeed a relative at all) of the Robert and William Tippets, and as he is never recorded taking apprentices it is much more likely he was always a journeyman with some other maker (cf p.518 above). If the Robert Tippet business was indeed bought out, it was presumably by a major Bristol maker, but so little is known about the status of individual pipemakers it is difficult even to hazard a guess as to possibilities. George Ebbery (F 1721, fl 1781) and William Nicholas (F 1730, fl 1775), for example, are two makers who lived long enough to cover the period involved, but pipes attributable to both of them and bearing their own initials are known from North America, two certainly and one probably from post-1750 contexts, indicating they were shipping their own marked products abroad, which seems to lessen the likelihood of their manufacturing pipes for export with another name on them. An intriguing point is the occurrence of the floral- and scroll-decorated Robert Tippet-marked pipes together with pipes attributable to Israel Carey II in two kiln-tip deposits of essentially identical material, one found in 1971 at the angle of Broad Weir and Lower Castle St and the other found in 1973 immediately below Whitefriars, a lane off Lewin's Mead. The first deposit was adjacent to the Castle Green premises occupied by Israel Carey from 1782 until sometime between 1787 and 1791 and by his son John from 1791 or earlier to 1792 (R. Price *in litt.* 18 January 1974; see also pp571 and n39 and 766-7 below); as for the second deposit, Israel Carey was certainly at Lewin's Mead in 1775 - Sketchley records him at no 38 - and probably still there in 1781 as he is recorded voting in that year from St James, and he is also recorded voting from St James in 1774 so was probably already in Lewin's Mead by that date. Unfortunately, he took his freedom as early as 1756, and thus could have been working at Lewin's Mead from that date, so that the association of stylistically very late Robert Tippet-marked pipes with the Carey material at Whitefriars does not absolutely indicate a 1770s date for the former, though the Whitefriars Carey material's being identical to that from Castle Green does stongly suggest a date this late. Unfortunately, as we know the Robert Tippets (and the William Tippets) lived in Lewin's Mead at any rate at the end of the C17 (pp524-5), later C18 Robert Tippet-marked material from that area might as easily indicate the family continued in business there, somehow otherwise unrecorded, as suggest Carey or some other maker was producing Robert Tippet-marked pipes. A possibility to be considered is that a female member of the Robert Tippet family (cf Tippet family tree in Appendix IX) married an at-present unidentified Bristol pipemaker who inherited the family business. Unfortunately again, the Bristol Pipemakers' Guild Book surviving for the period 1709-66 records almost nothing of the guild's business - in which one would surely have recorded something as important as the transfer of an important business - and does not even note the Masters and Wardens, a list of whom would have indicated the most important makers of the period.

As has been discussed in Section V above, and is examined again below, 35 Bristol pipemakers are known left that city between the late 1720s and

1784. Of these, 32 went directly or eventually to the London area, and of these, four subsequently returned to Bristol. These four are:

John Frederick Bryant sr - F 1747, fl 1753-60 London, fl 1760 Bristol, D there ca.1777;

William Pearce - A 1721, F 1733/4, fl Bristol 1747, fl London 1754, fl Bristol 1756-74, prob. a later William Pearce noted in 1784 polls;

Samuel Richards II - F 1774 when at Woolwich, returned to Bristol later 1770s, fl there 1812;

John Edwards - F 1784 when at London, fl 1812 London, fl 1818 Bristol.

From the reminiscences of John Frederick Bryant jr, we know his father left Bristol because he did not like the pipemaking trade and went to London where he became a journeyman house-painter, returning in 1760 to start pipemaking only at the persuasion of a relative. It is perhaps unlikely that he brought back any moulds or new ideas on pipemaking from London, but the same source tells us Richards had a reasonably prosperous business at Woolwich and returned to Bristol because he had married a wife of "some considerable expectations"; and other evidence indicates Richards certainly continued his trade in Bristol. Pearce too we know to have continued his trade on his return to Bristol, for he is noted taking an apprentice in 1756, less than two years after he is recorded still in London. Edwards, however, is definitely out of the question, since whenever he may have gone to London his return in the 1810s is ca.40 years later than the date at which London-style influence must have been reaching Bristol. Although, therefore, it is clear the London type 11 bowl form was spreading throughout England by about the last quarter of the C18 and perhaps as part of a general change, it is worth considering that William Pearce and Samuel Richards II, is not John Frederick Bryant sr, did bring a contribution of London-shaped material to the Bristol industry in the second half of the C18.

The problem of where the general type 9 shape originates, however, still remains. In Bristol, the large amount of Robert Tippett family material provides a useful typological series, for the family's products, or at least (see above) products with their name, cover the century 1660-1760 and thus straddle the period ca.1680-1700 when the type 9 shape was appearing. The fact that the three generations of the family are all called Robert, and the surprising lack of documentary evidence on what must have been a well-to-do family, makes it difficult to date the material very precisely on historical evidence, but if - as suggested above - there were latterly pipes being produced with the Robert Tippet name which were not made by that family, this should not affect the earlier Robert Tippet-marked material, and the identification of material attributable to J(o)ane Tippet the widow of Robert I does provide dating for type 9 material, as is discussed in detail below. As FIG 156 shows, a convincing pattern of typological development is discernible, and a good case can be made for the Bristol type 9 bowl-shape evolving from the earlier West Country chinned type or at least from its influence.

In the second half of the C17 bowls became steadily larger - no doubt as tobacco became rapidly more plentiful (see 1: V) and technology improved, resulting in thinner bowls and stems and narrower stem bores; and it is these features which contribute the major changes to the typological progression towards the type 9 shape from the small chinned bowls of mid-century. Thus, for example, the Robert Tippet bowls c, g, h, and o in FIG 156 convincingly offer the typological steps from the small chinned bowls to the true Bristol type 9 pipes of the Robert Tippet examples t-y in FIG 156. Interestingly, as noted earlier, a similar sort of evolution can be made for the Taunton and South-West type 10 bowl style, also deriving it from the West Country chinned style, using the extensive collection of material in the Somerset County Museum at Taunton.

More important, however, from the point of view of establishing the origin of the West Country type 9 style, is the fact that an equally persuasive typological development from the small chinned bowls to the type 9 shape can be seen in the Marlborough pipe material studied by Atkinson. Thus Atkinson's bowl-shapes K-V (1965c: 89 fig 1,K-P and 91 fig 2,Q-V, rev ed 1969b) show a flawless typological progression (FIG 157), with shapes K-O and Q and V all known to have been produced by one pipemaker, Thomas Hunt, who is first noted in 1667 and is still working in 1696, thus straddling like the Robert Tippets but in clearer fashion the crucial period in which the type 9 form appears. In two West Country centres, therefore, convincing evidence can be produced to suggest that the West Country type 9 bowls were the result, not of any outside stimulus as has been persistently suggested since at least 1852 (1: II(a)), but of a simple evolution from a widespread mid-C17 West Country form, the chinned bowl possibly made famous initially by the Gauntlett family in south Wiltshire.

At this point one has to consider the London-Home Counties version of the type 9 shape to see whether it too might have developed out of earlier local bowl forms. Here one is on less certain ground. There is a wide variety of bowl shapes being produced in London in the C17, but one which is worth considering is Atkinson and Oswald's type 8 (ca.1610-40), which retains the same form throughout most of the century, changing only in increasing size as it evolves through Atkinson and Oswald's type 15 (ca.1660-80) to their type 19 (ca.1690-1720) by which time the bowl has become somewhat elongated (Atkinson and Oswald 1969: 177-9, 180, figs 1 and 2 passim; the various types referred to here are reproduced in FIG 4 and "Atkinson and Oswald" in the text will be shortened to A-O). During the period ca.1660-80 a distinctive new shape, with the bowl set at a marked angle to the stem but straightsided, with back and front parallel to each other, appears - this is Oswald's type 7 series, particularly type 7a (Oswald 1961: 58, 59 fig 1,7), A-O type 18. This shape too has been held to show Dutch influence (e.g. O'Neil 1961: 378); this is discussed below. As Atkinson and Oswald note, their type 18 evolves into their types 20 and 22 (ca.1680-1710), the bowls becoming more elongated but still remaining basically parallel-sided with some curving in towards the base. One might argue that A-O type 21 (ca.1680-1710) was a development resulting from a fusion of elements from their types 20/22 and 19; certainly type 22 can be regarded as a prototype for the true London-Home Counties type 9 series represented by A-O types 25 (ca.1700-70) and 26 (ca.1740-1800). The argument, however, is not as convincing, at least to this writer, as that deriving the West Country type 9 bowls from the West Country chinned types; but it does not do violence to the dating of their various London types given by Atkinson and Oswald.

The question now arises as to whether there might be any influence on the London-Home Counties type 9 series from the West Country type 9 pipes, or whether the influence might be the other way, or whether influence both ways might have occurred, or whether there was no influence either way and two similar forms evolved independently at approximatly the same period.

It is difficult to give definite answers to these problems. As noted earlier, West Country type bowls do occur as far east as London and Sussex; London-style type 9 bowls, however, do not appear to have come a comparable distance west until the last quarter or so of the C18, though the sporadic occurrence in some parts of the West Country of moulded initials on either side of the spur or base on West Country bowls usually in addition to the traditional methods of marking these pipes, suggest the percolation west of London influences (Atkinson and Oswald 1969: 203). However, late examples of chinned bowls and a version verging on its development into the West Country type 9 style were actually being copied by some London makers in the later C17 (Atkinson and Oswald 1969: 179, 178 fig 1,16-17, 185, 186 and 188, 187 fig 5,26). (If the John and Thomas Hunt appearing as journeymen in the ca.1696 oath of allegiance to William of Orange presented by the London pipemakers' guild were indeed two of the sons of Bristol pipemakers Flower and Christian Hunt (pp600-1) and if the Edward Randall noted taking an apprentice in London in 1719 were indeed the Edward Randall jr F 1699 in Bristol as has been suggested (Oswald 1960a: 48; 1961: 62 n.6; Atkinson and Oswald 1969: 186, 187 fig 5,23-5), there would have been at least one or two Bristol-trained makers working in London at the end of the C17 or beginning of the C18; unfortunately, however, all these identifications lack proof, as has been noted above (pp600-1 & 611-2).) There is some similarity between A-O types 20 (ca.1680-1710) and 19 (ca.1690-1710) and some Robert Tippet pipes (e.g. figs j and k), and these latter do not appear to be standard Bristol varieties, but it would be as easy to regard the Robert Tippet examples as out-of-the-mainstream forms produced by a prolific and inventive family of pipemakers.

Dating evidence might also suggest London and the Home Counties adopted their type 9 versions later than did the West Country, thus at least allowing the possibility of the basic style spreading into the London area from the west; as is discussed below, the West Country type 9 was appearing in the 1680s and 1690s whereas Atkinson and Oswald date the appearance of the true London-style type 9 - their type 22 - to ca.1700. At Portsmouth, Atkinson (1969c) shows that both West Country and London-Home Counties type 9 forms were produced, the former covering the period ca.1690-1760 and the latter the period ca.1720-60 and later, again suggesting the West Country forms predate, or at the very least are evolving independently of, the London-Home Counties styles. Further, the London bowl-shapes which precede the London type 9 forms at Portsmouth are A-O type 19, which as noted above is a proto-type 9 form which can be derived from earlier London forms and dates at Portsmouth to ca.1690-1710, and type 22, which is a late Oswald type 7 form dated here to ca.1690-1700 and unconnected with the type 9 style. This emphasizes the lack of true London-Home Counties type 9 forms at Portsmouth prior to ca.1720.

Excluding the Robert Tippet family for the moment, Bristol makers of the later C17 and early C18 known from marked bowls to have been producing pipes in the type 9 style are as follows (they are arranged in order of date of freedom):

R. Williams - either Roger F 1668, fl 1677, D by 1692 or Robert I A 1674, F 1685, fl 1714;
James Abbott - F 1676/7, fl 1715, D by 1721/2;
William Taylor - A 1681/2, F 1688/9, fl 1706, D by 1721;
John Hunt - one or both of two brothers with same name, sons of Flower Hunt; one F 1689, the other A 1685/6 and F 1694, at least one fl 1716/7;
Devereaux Jones - one or both of father A 1684, F 1691, fl 1713, D by 1727 or son prob. B after 1696, F 1727, fl 1739, D by 1748;
Charles Chick - A 1688, F 1697, fl 1707, D by 1721/2 according to Burgess Roll entry but listed in 1722 Poll Book;
Thomas Owen - one or more of three makers with this name: father A 1688/9, fl 1696, F 1698, D by 1725; son F 1725; third Thomas A 1716, F 1727; second and third Thomas both fl 1739;
Isaac Evans - son of one of the William Evanses and listed with father 1696, F 1698, fl 1700/1;
Henry Edwards - A 1689, F 1699, fl 1727;
Henry Hoar - prob. A 1688, with Robert Tippet II 1696, F 1699, fl 1723, D by 1739;
John Macey - one or both of father A 1691, F 1700, fl 1726 or son F 1723; one fl 1739;
Edward Reed - A 1699, F 1706, Master of Company 1715, fl 1723, poss. fl 1735;
I. Jenkins - prob. James A 1700, F 1707, fl 1739; son John F 1739 prob. too late;
John Wilson - F 1707, fl 1722.

Unfortunately, most of these makers span too long a period to supply precise dating, either because they worked over a long period or because like the Robert Tippets, father-and-son or other combinations of the same name make specific attribution of marked pipes difficult. To attribute a bowl to a certain maker among more than one of that name because the bowl can typologically suit that maker's dates tends to beg the question, since before the typology can be used with confidence its correctness has to be proved from datable material. All 22 makers listed above, so far as is at present known from material found either in England and Wales or in North America, produced pipes only in type 9 shapes, but this does not disprove that some of them may have made pipes in earlier shapes: it would go against all other accumulated evidence, for example, to suggest that because Roger Williams became free in 1668 and possibly produced type 9 pipes that he could have been making them as early as 1668.

If the R. Williams bowl could be proved a product of Roger Williams, however, this would be strong evidence for dating Bristol type 9 bowls from the 1680s at the latest, for Roger was definitely dead by 1692 and though last certainly noted alive in 1677 was possibly alive in the later 1680s. Typologically the bowl should be early, but either Roger or Robert I could have produced it; however, even if the bowl cannot be closely dated on historical evidence it is still significant that with the questionable exception of Roger Williams no maker earlier than Robert Tippet II F 1678 is known to have produced a type 9 bowl form, whereas there are a score or more makers using this form in the decades following. A warning about the over-precise use of typology for dating, however, is indicated by comparing the Williams bowl and ones used by Chick, Macey, Reed, and Wilson - they are all virtually identical, suggesting this "early" form was still common at least as late as the first decade of the C18 and probably into the second (cf remarks made on p.15 above regarding the Bristol Pipemakers' Guild Book entry of 1734/5 referring to there being a guild mouldmaker, who may well have produced moulds of identical bowl form for a number of different makers and over a period of time).

Additional evidence comes from Atkinson's study of Marlborough pipes. As noted earlier, Thomas Hunt of Marlborough, who was working for at least the period 1667-96, produced a whole series of piper covering the typological development of the chinned bowls into type 9 form. The last known date for Thomas Hunt, 1696, is not the date of his death, so there is no definite terminus ante quem for his type 9 bowls, and Atkinson (1971: 186; 1972c: 156) dates Hunt's bowls up to ca.1710, but the variety of type 9 material Hunt did produce suggests he had been making this style for some time before he died. Atkinson (1965c: 92, rev ed 1969b) suggests Hunt introduced the type 9 bowl form ca.1685, which date seems reasonable particularly as Thomas Hunt pipes, one of them an early form of type 9, were found in a context in Durham with a terminus ante quem of 1684 (Parsons 1964: 238, 244).

At Salisbury too the type 9 form was in use before 1700, Atkinson (1971: 181) noting that at least two makers there were producing this style ca.1690.

Some corroborative evidence comes from the occurrence in North America (see section on trade abroad) of pipes made by J(o)ane Tippet, widow of Robert I: her pipes are of a mature West Country type 9 form (Oswald 1959a: 60, fig 2,B and D; I. Walker 1971c: 79 fig 18) - typologically of a later form than the Williams pipe - yet the last reference to her is in 1696. Her husband, Robert I, died between 1680 and 1687 and presumably following his death J(o)ane took over his business; she appears therefore to have been working at least in the 1680s and 1690s. Unfortunately it is not known when she died, so that the 1696 date is not a firm terminus ante quem - her pipes from Louisbourg are probably early C18 - but there is a definite possibility she was producing type 9-shaped bowls appreciably before 1700.

Further archaeological evidence for a 1690s or earlier date for the introduction of the West Country type 9 style comes from the Pen site in New York state (see section on trade abroad), believed to be a site whose destruction in 1696 is historically documented. Here both Thomas Owen and Robert Tippet pipes of developed type 9 form together with a number of unmarked pipes of the same shape were recovered.

There is thus evidence to indicate that the West Country type 9 series of bowls had appeared some 10-15 years before the apparent first appearance of the London-Home Counties version ca.1700. There is, at least at present, no direct evidence that the London style was influenced by the West Country types, but the presence of West Country-style bowls in London and Sussex, including Thomas Hunt bowls in London in an early type 9 form, indicate at least the possibility that the London-Home Counties series did owe something to influence from the West Country.

However the type 9 series spread, it did so rapidly, for it was appearing in the North-East before 1700: Parsons (1964: 236 fig 1,8 and 9) dates forms showing type 9 influence from ca.1680, noting the change seems to be just appearing in material sealed under a floor of 1684 (1964: 244, 238). In general Parsons's North-East typology suggests London influence on local C18 type 9 shapes (fig 1,10-12), but several pipes in the deposit with the terminus ante quem of 1684 were Thomas Hunt pipes as already noted. London influence and London-marked pipes are noted in the North-East from the early C17 (Parsons 1964: 238), no doubt as a result of the coal-trade but the presence of these Thomas Hunt pipes, shows West Country contacts that far and indicates one has to consider the possibility of West Country type 9 influence appearing at the other end of the country.

Finally, one has to consider whether there could have been any foreign influence stimulating the evolution of the type 9 shape - in other works, the oft-quoted but never convincingly demonstrated Dutch influence supposed to have been brought over with the troops of William of Orange in 1688 (the history of this explanation is examined in 1: II(a)). When this writer commenced his study of clay pipes from Louisbourg in the early 1960s, he was aware that an obvious weakness in this explanation, aside from the dates not really agreeing, was the lack of any convincing Dutch pipe style which could be cited as the required prototype. Little work, however, had been done to establish various Dutch bowl types.

Omwake (1965b: 13) suggested the prototype Dutch form was a heelless conical bowl with straight sides, set at a relatively upright angle - ca.100° - to the stem. As noted earlier (pp269-70above), Omwake was apparently describing a bowl-shape found in the general area of Dutch influence in the NE United States, particularly New York state (FIG 118 in this study). This does not offer as convincing a parallel to type 9 features as does a hitherto unknown Dutch bowl shape found by this writer and described below (p.626 ; FIG 119); however, it might be considered as influencing the English type 7 shape with its parallel or roughly-parallel bowl sides, which does appear to be a distinctive new shape occuring from ca.1660 onwards with no known native antecedents, though as noted above the Dutch pipe has a conical bowl. There is a Bristol type 7 variant which appears, however, to have been restricted to some of the products of one or both of the William Evanses (figs c and d) and probably some of the later James Fox products (cf pp608-9 above) and in a heeled form to some products of the William Evanses (Oswald 1969: 23 no 34) and of Llewellin Evans (Oswald 1968: 35 no 53; 1969: 23 nos 30-1).

The possibility of this distinctive Dutch shape, which is unlike any other Dutch pipe style known to this writer either from published work or from visits in 1968 and 1969 to Belgian and Dutch museums, influencing the development of English pipe forms cannot be entirely dismissed, but if so the putative English derivitive was appearing ca.30 years before the time of William of Orange.

There is a variety of Dutch bowl which does have substantially parallel sides (e.g. Friederich 1964a: 8 fig 1 3rd row, centre and 11 fig 7 top row, centre; 1964c: 58 fig 1 3rd row centre and 61 fig 3 top row, left and 2nd row, left and btm row, rt; 1964d: 4 passim) which might be held as having some connection with this particular bowl under discussion here, but there are two key differences - the relative length of the bowl illustrated in FIG 118, which is appreciably greater than in those illustrated by Friederich, and the total lack of a "waist" where this bowl joins the stem, a feature present in all those illustrated by Friederich. The most Friederich's illustrations indicate is that fairly straight-sided bowl forms, though nothing close to that in FIG 121, are known in The Netherlands.

At present there seems no concrete evidence for Dutch influence being involved at this point beyond some similarity in shape and the occurrence in England of a new bowl-shape with no obvious English prototype. In any event, there seems no evidence to connect the type of Dutch bowl illustrated in FIG 118 with the type 9 forms, unless as noted above very indirectly in London with A-O types 18/20/22 influence on type 19 to produce types 25 and later 26 in the C18. Certainly the William Evans Bristol type 7 variant lies outside the mainstream of typological development from the chinned West Country bowls through to the West Country type 9 forms.

If any area of England were to be considered particularly open to Dutch influence through traditional trade connections it might be East Anglia: there is perhaps a possibility of a Dutch pipemaker working at Colchester in the second half of the C17 (Gant 1961b: 49), but Harley's claim (1963: 35) that a kiln discovered in Colchester had been run by a Dutch immigrant is erroneous - Harley appears to have equated Oswald type 9 bowls found there with true Dutch-shaped bowls (see 2: VII). A detailed examination of the East Anglian industry might reveal instances of Dutch influences, however - certainly at the end of last century it was noted (Cole 1892: 182) that country people in Essex called old pipes they found "Dutchmen". In fact, Dutch influence in the C17 has been noted on pipes from several east and south coast centres which were involved in Dutch trade, for example Edinburgh, Kingston upon Hull, Plymouth, and possibly Ipswich, and Dutch imports occur at Bedford (Oswald 1970c: 93, fig 14,6-7) and are considerable for this period at Hull and Plymouth (Oswald 1970b:230-1); however, only at Plymouth so far does there appear to have been influence on local types, Oswald suggesting one local bowl form of general type 9 shape and datable to ca.1680-1720 as showing Dutch influence (1970a: 126, 132, 133 fig 55,33, 142). Again, however, there is nothing to suggest this as a source for the spread of type 9 characteristics; rather, these bowls are probably of English type 9 form with what Oswald identifies as a Dutch modification to the profile of the front of the bowl.

Some of the problems in searching for a suitable Dutch prototype for the type 9 form can be seen when comparing an early form of the latter in Bristol (e.g. FIG 156, h-j and o in the Robert Tippet sequence, particularly fig o) with variants of the Dutch bowl form noted above and illustrated by Friederich (e.g. 1964a: 11 fig 7 1st row, left and centre; 1964c: 58 fig i 3rd row, centre; 1964d: 4 no 14). There is a parallel in the "waisted" junction of the bowl to the stem and in the slightly bulged middle to the bowl, and if the Dutch form had its rim parallel to the line of the stem its profile would look distinctly similar to the English. On the other hand, the English form can be convincingly shown to be a transitional shape between the later, bigger, chinned bowls (e.g. Robert Tippet fig c) and the true West Country type 9 form with no need at all to invoke outside influence.

Among the pipes at Louisbourg there did appear one Dutch example with a bowl quite unlike other known Dutch bowls which could plausibly be suggested as the missing prototype (I. Walker 1971c: 113 fig 44: FIG 122 in this study). The pipe had typical Dutch stem-ornamentation and a typical Dutch heel-mark, and was of good quality; the mark does not occur in Helbers and Goedewaagen's study of Gouda pipemakers (1942) but neither did several other marks on orthodox Dutch bowls from Louisbourg and in any case the pipe need not necessarily have been Gouda-made. One of the basic characteristics of Dutch pipes is the plane of the bowl rim always - into last century and even this - lay at a marked angle to the line of the stem (e.g. FIG 154 lower): in this Louisbourg example, the bowl rim is parallel to the stem. Illustrations of Dutch bowl types appearing during and after the writer's Louisbourg study (e.g. Brongers 1964a-b, passim; Friederich 1964a-d; 1970; Douwes 1964; Atkinson 1972d) illustrate nothing like this example, nor were any seen by the writer in visits to Dutch and Belgian museums in 1968 and 1969 (although not published until 1971, the manuscript of the Louisbourg pipe report had been written by early 1966).

The theory evolved by this writer (I. Walker 1971c: 111) was that this bowl-shape was an innovation in The Netherlands in the 1680s which did not catch on among the Dutch, who apparently had a conservative tradition about how their bowl rims should lie in relation to the stem, but which had been introduced into England by Williams's troops. Only the one bowl of this type was found in the Louisbourg material studied, but two stem-fragments with the same stem-decoration, one of them also having enough of the bowl to show the same heel-mark, were noted and in all cases they were in the earliest deposits at Louisbourg and probably datable to the 1720s (I. Walker 1971c: 106, 107 fig 38, 111, 108 fig 40 centre). These scattered occurrences in the earliest Louisbourg contexts would suggest any major period of popularity had been some time earlier.

So far as this writer is concerned, the theory is still as tenable now as when first formulated - if it is still necessary to invoke Dutch influence to explain the appearance of the type 9 series. However, the evidence in the preceding pages, at least to this writer's mind, indicates there is no need to invoke foreign influence and that at least the West Country type 9 form was a natural evolution from the earlier chinned bowls. Precisely where the first type 9 shape evolved remains unknown, though there is really no reason to believe it had to start with one specific person; the general similarity over the extensive West Country area - Bristol, Wiltshire, and Hampshire - both of chinned bowl shapes and type 9 shapes suggests there was enough contact within the area to see that ideas spread and interchanged rapidly. Atkinson (1965c: 87-8, 93-4, rev ed 1969b; 1970a: 186) believes Thomas Hunt of Marlborough introduced the new shape there ca.1685, and the Durham Thomas Hunt pipes indicate he was heading towards that shape by 1684 or shortly before.

In conclusion, therefore, it is suggested that the West Country type 9 shape evolved there in the 1680s from the West Country chinned bowls of the mid-C17 made famous by the Gauntlett family, and that no outside influence was involved.[62] Whether West Country type 9 influence moved east to London and to other areas influencing bowl shapes is uncertain, but West Country type 9 bowls do occur in London and the Home Counties and the specifically

London-Home Counties type 9 form seems to appear only ca.1700. Thomas Hunt material at Durham in a context with a terminus ante quem of 1684 might explain the adoption of type 9 features in the North-East from ca.1680 onwards. However it spread, the type 9 forms did so rapidly and widely throughout England in the period 1680-1700.

Before passing on to C19 material, there are three finds of Bristol pipes probably belonging to the later part of the C18. The first is a bowl from excavations at Cirencester with OKELY in raised moulded capitals running down the right side of the bowl at an angle somewhat past the vertical (Oswald 1960c: 64 fig 11,7). There were four Okelys recorded as pipemakers in Bristol between the 1730s and 1820s, but as the form of mark recorded here is not otherwise known among Bristol makers and does not have the first name or initial it is not easy to decide which of the four made it. (This form of marking seems rare, but examples marked SAMUEL up the left side of the bowl and BENBOW down the right are products of Samuel Benbow of Stony Stratford, Buckinghamshire, who was working 1684-1709 (Oswald 1970b: pl 212, p.244). A C19 version of this form of marking, with the maker's surname and place of work, is known from NE England (Parsons 1964: 246 fig 3,e, 248, 253).)

The bowl shape, however, would suggest the later C18, and is similar to ones from North America attributable (see section on trade abroad) to Anna Viner, who was manufacturing pipes by 1775 and continued to do so until 1805, and to ones from Bristol (see below) produced by Samuel Richards II and/or III, who between them cover the period from the 1770s to the 1810s in Bristol. This would mean that the first John Okely (A 1723, F 1732, fl 1739) must have been too early unless he continued for appreciably longer than we have evidence for; on the other hand it could be any one of the second John Okely (F 1768, fl 1798, D by 1800), his wife Martha (fl 1800-12), or his son William (working with mother 1806-12, F 1809, fl 1813-27 Bristol and perhaps in London 1830s with widow continuing his business into 1850s). Some Okeley pipes from the unpublished Water St-Holister kiln site in Bristol, probably products of the first John Okely, suggest he latterly adopted rather elaborate cartouches (figs c-e), but as noted above his dates appear to be too early for this pipe from Cirencester. Oswald (1970b: 240, probably quoting K. Marochan, the kiln excavator) says that the second John Okely was a son of the first, which might indicate a family tradition of distinctive markings; however, if the two were father and son the second John Okely chose to take his freedom on grounds of marriage (to Elizabeth the daughter of Bristol pipemaker Thomas Jenkins F 1733 fl 1754, father of Joseph Jenkins noted earlier) and not on patrimony (presumably Elizabeth Jenkins was Okely's first wife - as noted above, later his wife's name was Martha; the first reference noted to Martha is in 1787 when her husband and she took an apprentice). (No documentary evidence to indicate relationship between the two John Okelys is known to this writer; however, Marochan's research into the Okely kiln-site and property may have turned up such evidence.) What are probably also products of the first John Okely have a simple mark comprising the letters IO surmounted by a star impressed on the bowl facing the smoker (figs a and b) in the style used by the Robert Tippets and a number of other Bristol makers of this general period (this also occurs on bowls with the rather elaborate cartouche noted above); if the two Okelys were indeed father and son one would have an interesting development in bowl shape and method of marking from the earlier C18 possibly into the early C19.

The two other finds are one probable and one certain product of Anna Viner (fl 1775-1805). The former is a stem fragment with the name VINER in a band round the stem, with a band of scallop-shell decoration above and an empty band and then a band of diaper pattern enclosing fleurs-de-lis below (fig c) from Barrow Gurney, just beyond the modern Bristol city boundary to the SW. Although there is no initial with the name, this form of decoration is much more likely to belong to the later C18 than to the mid-C18 and thus less likely to be a product of Anna's husband, George, who is known to have died ca.1775. The latter find is a bowl with VINER stamped on it facing the smoker and A/V on the heel sides from Bath (Brown and Sneddon 1973: 296). Exactly the same form of bowl has been found in North America (see p. 679 below).

At Devizes there are three bowls which can be attributed to one or other, or both, of the two Bristol makers Joseph Edwards sr (F 1747, fl 1792, prob. D by 1794) and Joseph Edwards jr (F 1774, fl 1823), though the argument for their identification is somewhat involved and as two of the bowls are unprovenanced and the third possibly from Bristol it is not certain that their presence in Devizes Museum indicates Bristol trade. The shapes of all three are typical enough of the general London-derived type 9 form which spread over England in the later C18, including to Bristol by the 1770s (see pp616-9 above and pp636-8 below), and all have basically similar markings. One of the two unprovenanced examples has the letters IE surmounted by a floral spray on the right side of the bowl and a floral or branch motif on the left; the other has similar designs except that the letters have a floral device below them. The third example, that possibly from Bristol, has the same letters and a branch design below them (though on this example very vaguely moulded) on the left side of the bowl, and a very vague pattern but no letters on the right side.

The suggestion that these are of Bristol origin and produced by one or more of several Edwardses with christian names beginning with J who were working there in the later C18 and earlier C19 (the general period indicated by bowl form and style of marking) is based on the occurrence of a bowl similar to the unprovenanced Devizes specimen with the floral device below the letters, though with no motif visible on the opposite side of the bowl, at a site in Quebec province founded in 1779 where a typical London-derived bowl with the letters IE in a cartouche on the right side and a branch pattern on the left also occurs (the site, Fort Coteau-du-Lac, also has C19 Ring of Bristol pipes - see below, section on trade abroad). This IE cartouche example is in turn paralleled among Bristol finds, though it has not been noted that one mark occurs there with the branch design on the opposite side of the bowl.

In view of the similarities among all these examples it seems reasonable to suggest they are all products of the same maker, or at least of the same family. The suggestion that the Joseph Edwardses are the most likely makers rests largely on the elimination of two other makers with these initials at this time as being less likely, though some independent hints can be adduced to further support the suggestion. The two other possible makers with the initials IE known at this time are Jonas Edwards II (F 1747, fl 1754 Bristol, fl 1774-84 London) and John Edwards II (F 1784, fl 1784-1812 London, fl 1818 Bristol) and they can be excluded not only because they were in London for most or all of the period in question but also because they never appear listed as running a business and must always have been journeymen working for other makers (see entries in Appendix IX). This leaves the two Joseph Edwardses, whose products would no doubt have been very similar, particularly as directory entries for 1791 and 1792 indicate the two were in partnership as Edwards and Son. Joseph jr is among four makers signing an advertisement dated 1799 announcing they produced for the American among other foreign markets (advertisement found among pages of the Bristol Pipemakers' Guild Book); one of the others signing was Anna Viner (fl 1775-1805) whose pipes have occurred in post-American Revolution sites in Quebec province and New York state (see p.679 below).

On these grounds, therefore, it seems reasonable to identify all these IE-marked pipes as products of one or both of the Bristol Joseph Edwardses, though as noted above the unknown or uncertain provenance of the Devizes specimens makes it impossible to say whether they indicate Bristol pipes were actually being traded into Wiltshire at this time.

As has already been noted in Section VI the Bristol pipe industry, after having almost died at the end of the C18, revived in the early C19 and reached a peak in the 1840s and 1850s before collapsing dramatically in the 1860s and being virtually dead by 1900. This revival is reflected by a certain number of pipes found in the area under study here. By the C19 it was common for pipemakers to mark their products with their name and place of work, the most frequent manner - one which may have originated among Liverpool or possibly Chester makers early in the second half of the C18 (4: II and III) - being to mould-impart the name on the left side of the stem and the place of work on the right. The name of the particular pipe style, or some topical slogan designed to appeal to the market, were also moulded or stamped on the stem of the bowl.

One of the earlier C19 Bristol pipe-fragments is part of a stem at Stroud (from Slad NE of Stroud) the inscription on which reads -TO·TRAD- on one side and -KLY·*·BRI- on the other which must either be a very late product of the later John Okely (see above) or, more likely, a product of Martha or William Okely who as indicated above cover between them the period 1799 or 1800 to 1827 in Bristol. The fragment of the name Okely is interesting because it suggests the surname was being spelt Oakly at this time. Eighteenth-century evidence consistently prefers the spelling Okely and the C19 poll-books give Okely twice and Okeley once, but trade directories in the C19 frequently use Okeley or Oakley; in 1812, as noted in Section VI above, an apprentice entry starts the spelling "Oak-" which is then crossed out and the spelling Okeley used.

What the slogan on the opposite side of the stem was is not absolutely certain: two other stem-fragments at Stroud (unprovenanced) have the partial inscriptions SUCCESS TO - and - BRISTOL* and a third fragment at Stroud (from Leonard Stanley) has SUCCE- and -OL, and these are probably parts of similarly-marked pipes. The slogan most likely read in full SUCCESS TO TRADE, which would have been topical at the beginning of the C19 when trade embargoes on both sides of the Atlantic from 1807 brought serious setbacks to British merchants and were not abandoned until 1812; this might be particularly relevant to Bristol, whose trading prosperity by the end of the C18 was rapidly slipping. Alternatively, a slogan such as "success to trade" might be associated with the beginning of the free trade movement in the 1820s; either dating would agree with the Okely dates. That such a slogan was topical last century is indicated by its occurring, along with the slogan IRELAND FOR EVER, on a bowl - unfortunately unillustrated - from an excavation in Co. Dublin (Rynne 1967: 34 n.6). (I am indebted to suggestions from P.M.W. Curtis of London, who answered an appeal for information from the writer which appeared in the 20 April 1972 issue of *Country Life*; also to E.P. Thompson of the Centre for the Study of Social History, University of Warwick.)

The major Bristol pipe-manufacturer in the C19, or at any rate in the earlier part of the century, appears to have been the *Ring* family. So far, they are the only Bristol makers known to have exported to North America in the C19 (see section below on trade abroad). They first appear as pipemakers in 1803 and continued until 1883 or 1884. Between 1816 and 1849 the Ring firm advertises itself as an "Ohio Tobacco-pipe manufacturer": stem fragments marked RING BRISTOL/OHIO have been found in North America and one marked -G BRISTO-/OHIO is in the collections at Stroud (From Nailsworth south of Stroud). An apparent characteristic of an Ohio pipe was that it had between the inscription and the bowl a "barber pole"-like spiral ribbing edged at either end by ribs encircling the stem at right angles to its axis (fig *b*); one Ring Ohio pipe from Canada has a plain bowl but another, also from Canada, had a fragmentary bowl with T/D on the sides of the spur (fig *d*) indicating there must have been different bowl forms associated with the firm's Ohio pipes (cf I. Walker 1966d). Further, a spirally-ribbed stem fragment again from Canada with its inscription missing but almost certainly from an Ohio pipe had a common C19 fluted bowl attached (fig *g*) while a fourth Canadian Ring Ohio stem fragment came with bird's feet-like marks above and below the inscription (fig *c*), all of which suggest a variety of Ohio pipe forms (for more details see section on trade abroad). A stem fragment with spiralled decoration at Gloucester (from Edgehill, presumably the Edgehill in Warwickshire between Warwick and Banbury) may belong to an Ohio-style pipe and perhaps to one of Ring's products; however, a 1900 price-list of Scottish-made pipes notes (Anonymous 1900: 52) that the Glasgow firm of Waldie was still listing Ohio pipes, so as a style Ohio pipes clearly had a long life and were not an exclusively Ring product.[63]

Another form of stem decoration used by Ring and again known from marked North American specimens is similar but has the ribbing running in lines parallel to the line of the stem (fig *h*). The inscription here, however, merely reads "Ring/Bristol". A stem fragment with this type of ribbing but with not enough length surviving to show whether there was any stem inscription is at Tewkesbury.

Again at Stroud, there is a stem marked R C RING & C°/BRISTOL from Frocester. This particular Ring mark dates the fragment to the period 1862-1883 or 1884 when the last generation of the Ring family to run the firm, *Richard Charles Ring*, was in business.

Ring pipes in the Bristol collections are unfortunately rare, and in fact Ring products are much better known from finds in North America.[64] In no case so far has a Ring-marked bowl or a bowl attached to a Ring-marked stem appeared with any lettering on a heel or spur representing a mark of the firm, but a number of bowls or bowl fragments with R/R on their spur are at Stroud and one of the same style is known from Port Royal, Jamaica (see below, trade abroad), and it is tempting to suggest these are the products of the Ring firm either under Richard Charles Ring (1863-83) noted above or under Richard Franks Ring, whose name is associated with the firm from 1813 to 1849. The Stroud museum bowls come from Stroud itself, from Slad (NE of Stroud), Leonard Stanley and Eastington (both west of Stroud), Paganhill (on the western outskirts of Stroud), Dudbridge (also on the western outskirts of Stroud - two examples), and Brimscombe (2 miles SE of Stroud), and there is one unprovenanced example and also a possible example from Kings Stanley (west of Stroud). One of these bowls has the open hand and eye masonic emblem; masonic emblems were very popular on pipes last century, no doubt being used with the idea of appealing to freemasons, who may also have used such pipes in their lodge meetings. Another of these bowls depicts a curved long-stemmed pipe on the left side of the bowl and a wine glass on the other.

Similarly-initialled bowls and bowl fragments, some with masonic emblems similar to that on the example noted above, occur frequently in collections in a restricted area of South Devon, being noted at Brixham, Dartmouth, and Totnes, at which latter they occur both in the local museum and the A.S. Brook Collection. An example also occurs at Barnstaple, in the St Anne's Chapel Museum, in North Devon.

The two Brixham examples are C19 TD-shape bowls, plain except for leaf decoration along the mould-lines on the front and back. At Dartmouth there is one example with a bowl undecorated save for the leaf motif along the mould-lines; one fluted bowl with mould-line leaf decoration; one with the masonic motif of the eye, heart, and open hand decorated with foliage; and one fragment of a late Broseley-like keel and heel - a skeuomorphic representation of the large Broseley heel appearing from the second half of the C17 into the earlier C18 with its extension merging into the bottom of the stem (the "keel"). At Totnes the museum has three examples of the initials occuring on an octagonally-faceted, or fluted, bowl; other bowl fragments in the collection suggest the rims of these bowls, above the termination of the facets, had a surround of stars in a narrow band. There is also one specimen, possily two, with plain C19 TD bowl-shapes but with the plane of the bowl rim angled away from the smoker instead of being, as is usual, roughly parallel to the stem line. The A.S. Brook Collection example has the masonic motif of the rayed eye over a heart. The Barnstaple example also has a masonic emblem; a rayed eye on either side of the bowl, on one side over a rather surprised-looking animal of the deer variety and on the other over a horn hanging from a hook. Both sides have liberal foliage decoration.

At first sight it seems difficult to suggest with any conviction that these Devon examples are likely to be Ring of Bristol products, but with the advent of the railway possible markets lay open much farther than would have been practical to reach by other methods. The possibility of a local maker in South Devon must be borne in mind, and indeed there was at least one, in

Torquay - Watcombe - who was active in the second half of the C19 (information at Torquay museum); he appears to have specialized in producing pipes in red clay, and several of his products are in museums in the area. On the other hand, there is a Watcombe product in the museum at Abergavenny which while it may have reached there through some holiday-maker might also be taken as indicating that if Watcombe products could travel that far Ring pipes could do likewise. As will be noted below, one Bristol maker was supplying pipes, and custom-marked ones at that, to customers at Devonport - even farther distant from Bristol than Brixham, Dartmouth, and Totnes - as late as the last decade of the C19. One agent in any of the three towns where these R/R-marked pipes have occurred could easily have been responsible for supplying local tobaconnists in the surrounding area if Ring had been able to sell him a shipment. However, Oswald does list an Exeter maker with these initials, Robert Reynolds, who was working in 1850; and while no R/R-marked material was noted at Exeter or Topsham where one might have expected it from an Exeter maker, it must be admitted Reynolds is at least as likely a maker to have supplied these pipes in South and North Devon as Ring.

Pipes with R/R-marked spurs also occur at Wimborne Minster, at Shaftesbury in the Local History Museum there, at Salisbury, and at Marlborough. Atkinson (1970c: 213 and 215; 1971: 188; cf 1972b: 76) notes they are widely distributed in Wiltshire and Hampshire, bowls associated with the mark being either plain or having a simple leaf design. Atkinson dates them to the middle decades of the C19 and suggests Richard Redwin or R. Readerson both of Basingstoke in Hampshire (directory dates of 1847 and 1852 respectively) as possible manufacturers.

The question of identified R/R-marked pipes is thus complicated, and only the discovery of pipes with this mark and their maker's name also are likely to be of help. One can allow at least some of the Hampshire and Wiltshire distribution to be attributed to either or both the Basingstoke makers; and with them one can place the Shaftesbury material noted above, as Shaftesbury is only just over the Wiltshire border into Dorset, and that from Wimborne Minster near the Hampshire-Dorset border. On the other hand, the Stroud examples are more convincingly attributable to Ring and Bristol not only because of the relative proximity of Stroud to Bristol but because other definitely Bristol-made pipes of this time, including Ring products, are already known from the area. The Marlborough examples are quite frequent, but as there are no pipemakers known there in the C19, or indeed after ca.1750, they must come from outside (Atkinson 1965c: 88, 94, rev ed 1969b). Atkinson indeed suggests pipes at Marlborough at this time were coming from Bristol, but specific identifications are at present lacking, and Basingstoke is nearer to Marlborough than is Bristol (cf first additional page of 1969b rev ed).

The Devon examples pose a neat problem of identification, and while this writer would like to hazard a guess at their being Ring products on grounds of some stylistic similarity to the Stroud material and the known supply of Bristol pipes to Devonport, even farther away in South Devon and at an even later date than Ring's time, it must be conceded that no definite attribution can be made at present. (See FIG 159 for a distribution map of these Ring and possible Ring products.)

As already noted in 5: I, the landlord of the Angel Hotel, Abergavenny, was buying pipes from Ring in the 1850s and 1860s, along with pipes from the two Southorn businesses in Broseley and from Spooner's Cambrian Pipe Factory at Tredegar. The museum at Abergavenny has marked Southorn and Spooner products but no marked Ring pipes, though there is probably no significance to be attached to this lack other than the vagaries of chance. Ring's were consistently supplying the Angel with 19-ins pipes according to the landlord's ledger-book; in 1860 the pipes are called "Straws", a term known to have been used by the Southorns, and in 1862 and 1863 (and 1864, under the guise of "Do") they are called "Broseleys" indicating quite open plagiarization of the name of that famous centre. Ring's "Straws" and "Broseleys" presumably imitated Broseley pipe-shapes; unfortunately no definite examples of Broseley-style pipes attributable to Ring are known, but one thinks of the Broseley-style bowl at Dartmouth with the R/R mark noted earlier as a possible Ring product as being a contender for this attribution. Certainly Spooner was producing a bowl very similar to the Dartmouth example, as evidenced by marked examples at Abergavenny. The recovery of pipe-fragments wth Broseley-like heels and keels during slum clearance in Lamb St, part of the St Jude's pipemaking ghetto in Bristol last century (see Section VIII below), suggests other Bristol makers besides Ring's were plagiarizing Broseley shapes, for Ring's were one of the few Bristol pipemaking firms last century not in St Jude's.

In 1883 or 1884 Ring's closed and the firm of Hawley, who were already a pottery concern on Temple Back, appear as pipemakers, perhaps taking over the Ring business. They continued as pipemakers only until 1901, but evidently contrived to sell their pipes quite widely (FIG 159). A fragment marked HAW-/-OL is at Stroud (from Dudbridge) and another fragment marked HAWLE-/-STOL came from the Ross-on-Wye area. A fragment marked Hawley and Sons was found during excavations at Donyatt in south Somerset (Coleman-Smith and Pearson 1971: 6). Outside the South-West an example came from Wolverton, north Buckinghamshire (Oswald in litt. 16 June 1972) and much farther away, there is another, marked Hawley and Son, in the City Art Gallery and Museum at Bradford in Yorkshire (Oswald in litt. 5 May 1968).

Other C19 Bristol material observed by this writer while visiting museums and collections are a stem fragment of which only one side survives with the letters -STOL at Stroud (from Petchcombe, 1-1/2 miles north of Stroud) and a stem fragment with the entire word BRISTOL on one side in the A.S. Brook collection at Totnes and presumably with the maker's name on the opposite side though as the fragment was in an unopenable case the maker could not be ascertained.

As noted in 2: VII pipes were recovered during demolition in Lamb St, Bristol, which are almost certainly products of the firm of Thomas John Corcoran and Co (fl 1890-99 and 1904) who worked at 14 Lamb St 1892-99. Among the pipes found were ones rubber-stamped on the bowl with the names of the Royal Albert Hotel, Devonport, and the White Swan Hotel, Swansea. This form of marking was apparently relatively widespread (see 2: VII), but Corcoran did advertise just such personalization of his products in 1892. What is interesting here is that even as late as the last decade of the C19 at least one Bristol pipemaker was managing to get business as far away as Devonport - 100 miles distant - and Swansea. Presumably it was railway transport that made such trade possible, though it is remarkable that Corcoran secured business at Devonport when there were several Plymouth makers at this time (Oswald 1970a: 140 and 142, 131 fig 54,25).

One other pipemaker may be mentioned here - William Henry Pardoe. Pipes made by this business have been found in London and at Wolverton in north Buckinghamshire (Oswald in litt. 1 December 1970). As noted in Section VI above and also later, William Henry Pardoe is recorded as a pipemaker in Bristol in the 1840s and 1850s, and the business continued at least into the 1860s for in 1863 a C. and G. Pardoe is noted at the same address. The problem is, however, that this business appears to have been a branch of the William Henry Pardoe Nantgarw pipeworks near Cardiff, which William Henry founded in 1833 and ran until his death in 1867. The Nantgarw business continued until 1920. It is therefore not clear whether the Pardoe pipes in question are Bristol products of Nantgarw ones; this writer has seen pipes with "Nantgarw" on one side though with no maker's name on them, but has seen no Bristol pipes which could be attributed to the Pardoes. (The Pardoe family, though originally from Derby by way of Worcester and Swansea, had been in Bristol from 1809 to 1821, William Henry's father Thomas being a ceramics painter and in independent business as an enameller in Bristol 1809-21; presumably Bristol connections were retained.)

What might be called other aspects of the Bristol pipe trade within England and Wales have been noted in Sections III and V above, the apprenticing to Bristol pipemakers sons of pipemakers from outside the city and the migration of Bristol pipemakers to other parts of the country to set up business there.

In the former category only five sons of non-Bristolian pipemakers were apprenticed to pipemakers in the city, three from north Somerset, one from Hereford, and one from London. Of the north Somerset apprentices, two came in 1670, one being Joseph Butt son of George Butt of Stratton on the Fosse discussed earlier and the other being John Whitcacre(?sp) son of John Whitcacre pipemaker at Chilcompton, only a mile from Stratton. The third is John Hockaday son of John Hockaday pipemaker at Portbury, who was apprenticed 1692. The Hereford apprentice is William Purton son of John Purton, who was apprenticed 1714 and the London apprentice George King son of John King "late of city of London" apprenticed 1740.

As noted earlier, Atkinson has suggested that with the growth of the Bristol industry in the mid-C17 members of well-established pipemaking families there left to set up business in the smaller country centres, where they took apprentices and thus started local industries. However, though pipemaking spread rapidly as a local industry in the second half of the C17 and especially in the West Country (Oswald 1960a: cf 41 fig 15 and 43 fig 16) and Bristol as a swiftly-emerging major pipemaking centre is the logical source for makers spreading into the surrounding areas, there is extremely little evidence for such movement.

As has already been shown, there appears to be no evidence that the Marlborough Thomas Hunt had any filial connection with either of the Bristol Hunts, and indeed it has been argued above that the Hunts came to Bristol from Wiltshire, not vice versa. In the case of the Butt family discussed above there is again no evidence to suggest they came from Bristol, and the same applies to the Howell family. The Taunton pipe-industry, which was clearly a major one by the late C17 had no connection with that of Bristol less than 40 miles away to judge by the different bowl-styles they had evolved. A full exploration of this potential field of Bristol influence will have to wait the study of whatever evidence exists in the form of apprentice and freedom rolls, poll-books, and the like for centres such as Taunton and Gloucester and other places in the West Country, but the only known C17 case at present of a Bristol maker moving to another area is that of Thomas Cullimore, A 1641 F 1656 fl Bristol 1657, the son of a Bristolian, who was apparently in Gloucester by 1664 when a son was apprenticed to a pewterer in London (Oswald 1960a: 65; additional information from A. Oswald, *in litt.* 9 March 1971).

The apprenticeship of sons of three north Somerset pipemakers Bristol makers is no doubt a natural reflection of the proximity of Bristol as the natural industrial centre for the surrounding area, but the apprenticeship of a Hereford pipemaker's son to a Bristol maker is probably a reflection of the fame of Bristol as a pipemaking centre, for as discussed in Sub-section (c) below there was a flourishing Herefordshire pipe industry at least in the later C17 which traded pipes into Glamorgan, Monmouthshire, Gloucestershire, Worcestershire, and Warwickshire, if not farther. The apprenticeship to a Bristol pipemaker of a son of a London maker seems strange, particularly as this occurred in 1740 when the Bristol industry was beginning to decline and Bristol makers were beginning to go *to* London to seek employment (see below); however, the apprentice in *question*, George King, may have had Bristol connections as there was a Richard King F 1660, a William King F 1695/6, and a John King F 1739 fl 1754, all Bristol pipemakers.

As noted earlier, Joseph Butt did take his freedom in Bristol, though not until 1704. John Hockaday apparently found either pipemaking or his master and mistress, Edward and Christian Sinderling, not to his liking, for 13 months after having been apprenticed he was discharged with the consent of himself and his father, it being noted that he was to receive no benefit for the time he had been apprenticed. Nothing more is heard of John Whitcacre or William Purton; if they (or for that matter Hockaday) did continue in the trade they did not do so in Bristol.

The possibilities that the John and Thomas Hunt listed as journeymen in the ca.1696 oath of allegiance presented to William of Orange by the London pipemakers' guild were sons of Flower and Christian Hunt of Bristol and that the Edward Randall jr of Bristol A 1689 F 1699 was the Edward Randall noted in London in 1719 has already been discussed (p.621 above). If any of these three were indeed Bristolians then they would have been the precursors of a long line of C18 Bristol pipemakers who made their way to London; however, as already noted, all these identifications lack proof.

The increasing number of departures of pipemakers from Bristol from the 1730s onwards, nearly all of them going to the London area, has already been discussed at length in Section V above, and there seems no doubt the major cause was the progressive decline of the Bristol pipemaking industry from ca.1740 onwards to the end of the century. As noted earlier, not all makers left Bristol because they wanted to find fresh markets for their products, for John Frederick Bryant sr had left before 1753 because he disliked pipemaking (Bryant 1787: i); and as the century progressed and pipemaking over most of England declined it is unlikely that many pipemakers could find opportunities for their trade - John Frederick Bryant jr was certainly unable to find anything more than occasional temporary work in the trade (Bryant 1787: xv-xxiii). Undoubtedly, however, many of those pipemakers leaving Bristol must have done so in the hopes of finding better employment in their chosen profession elsewhere.

In all, the poll books record 35 Bristol pipemakers who left the city between the 1730s and 1780s though some (see above), like Bryant sr, returned. The overwhelming majority went to London or to places in the London area - Woolwich, Deptford, Southwark, Lambeth, and Brentford. Robert Ducy (F 1727) had moved to Tellisford SSE of Bath by 1729 and was still there in 1754 when he is last recorded in the Bristol polls. He is the first Bristol pipemaker to be recorded leaving the city for other parts, though as noted in Section V it is possible his family came from this area of north Somerset. Thomas Bickham (F 1754) had moved to Bath by 1774, but by 1781 he had moved onto Lambeth and was still there in 1784. James Huish was at Ashwick in north Somerset, only ca.2 miles SSW of Chilcompton and Stratton on the Fosse when he became free in 1781, though by 1784 he had returned to Bristol and was still there in 1812. (That there was something of a pipemaking tradition in this area of north Somerset is suggested not only by John Whitcacre and George Butt being active in the second half of the C17 at, respectively, Chilcompton and Stratton on the Fosse (see p.634 above) but by a recent discovery of pipe wasters dated 1780-1800 marked WATTS/OACKHILL [sic] recovered near a possible kiln-structure at Oakhill, less than a mile SSW of Ashwick (Arch. Rev. 7 (1972) 63 s.v. Ashwick, Oakhill). Who Watts was is at present unknown, but it is entirely possible that Huish could have been a journeyman with him.) Of the 35 migrant pipemakers the only other who did not go either temporarily or permanently to London is William James (F 1756) who was still in Bristol in 1774 but had gone to "Eaton" in Buckinghamshire (presumably Eton near Windsor) by 1781. (Curiously, John Frederick Bryant jr (Bryant 1787: xvi) notes that he got a month's work, apparently as a pipemaker, at Eton - Bryant does not give a date but one can deduce from his account it was ca.1773. Bryant did work ca.1777 for Samuel Richards jr, a Bristol pipemaker then working at Woolwich (1787: xix, xx, xxi), so if he had been working for James at Eton one might have expected him to mention he had been working there for a Bristolian also.)

How much one can talk of these 35 migrant Bristol makers as spreading Bristol pipemaking traditions in the later C18 is difficult to say. In the first place we have little idea of how many of them did continue in the pipemaking business, and secondly we have none of their products so far identified to compare with known Bristol-made pipes and indeed little Bristol material of this period at all.

The bowls from New York state (see section below on trade abroad) attributable to Anna Viner (fig a) which must date within the period 1778-1805 - they come from a site datable to 1778-1812 and Anna Viner, who was working by 1775, last appears in 1805 - are of London shape and not a development of the earlier C18 Bristol styles. Viner's use of her initials on either side of the heel, or alternatively the use of a heart symbol lying on its side, have no precedents in Bristol though they are common in London from ca.1680 (e.g. Atkinson 1965: 253 fig 6, 255 fig 7). Her placing her name inside a dashed circle on the bowl facing the smoker, and its being placed there by a stamp, are again foreign to Bristol traditions, though they become common enough in pipemaking centres in England in the C19. From finds elsewhere in New York state of bowls belonging to Anna's husband, George Viner (A 1740, F 1747, fl 1757, D by 1775) and Thomas Grant (fl 1740s, D by 1751) it is clear that the traditional Bristol cartouche on the side of the bowl was still being used in the mid-C18.[65]

A bowl attributable to either Samuel Richards I (A 1740, F 1747) if he continued working into the last quarter of the century or more likely a product of his son Samuel II (F 1774 when at Woolwich, returned to Bristol later 1770s, fl there 1812) is very similar in shape; it is plain, but has the initials S/R on the sides of the heel (fig a). A bowl of the same shape is that marked OKELY from Cirencester (Oswald 1960c: 64, fig 11,7) mentioned earlier and probably attributable to either John, Martha, or William Okely, a family of father, mother, and son working in Bristol during the period 1768-1827.

There is also what is possibly a late product of William Nicholas (A 1723 F 1730 fl 1775) of this London shape known from Bristol and (see below, trade abroad) Port Royal, Jamaica, but with the traditional Bristol cartouche on the side bearing the initials WN and the front and back of the bowl decorated with scroll-work (fig b). This example is of particular interest because if indeed it is a Nicholas product it must date at latest to the 1770s, which not only gives a terminus ante quem for the appearance in Bristol of this bowl-form but also for the fluted and ribbed and scroll-work decoration that becomes common on bowls of the later C18 and earlier C19 (cf, for example, the discussion on pp617-8 above on the Robert Tippet-marked bowl with this form of decoration and also floral designs and the problems of dating the Robert Tippet family and its products). It also suggests that though Anna Viner had dispensed with the traditional Bristol cartouche used by her husband in mid-century, its use did linger on into the 1770s at least to take initials. A probable William Nicholas bowl (fig a), undecorated apart from its cartouche with the initials WN but of a shape indicating London type 9 influence, was found at a site in New Brunswick (see below, trade abroad) - unfortunately its context is unknown, but it must be later than 1751 when the site was founded and could be as late as the last known reference to Nicholas, 1775. A probable George Ebbery pipe from the same site and showing similar London type 9 influence in its shape comes from a 1775-1833 context; the probable Ebbery pipe from a site in Jamaica is not accurately enough illustrated to be certain whether it too shows London type 9 influence though it may be so, and another example from a site in Michigan occupied ca.1715 to 1781 though fragmentary has a suggestion of London type 9 influence (for references see section below on trade abroad).

Another Samuel Richards bowl (fig b), ornately decorated and attributable to either Samuel II or Samuel III (F 1812, last Bristol mention 1817, at Swanswa 1830) is of rather similar shape though smaller, and has a large S R raised on the right side of the bowl (as well as the letters on either side of the heel) which is perhaps a memory of the cartouche tradition.

There is also a bowl probably datable to the later C18 from Port Royal (see below, trade abroad), with EDW/ARDS in a rather elaborate cartouche comprising a circle of dots with some sort of floral and fan or shell motif at the foot. Unfortunately, the upper part of the bowl is broken off, which prevents a definite identification of bowl form and may have removed letters in the cartouche above the surname. However, there may be some London type 9 influence in the bowl shape, and the relative elaborateness of the cartouche suggests a later C18 date. No Edwards marks of this form are known from Bristol, the closest similarity being perhaps with the marks of John Okely (figs d and e), which were also laid out in dots. Lack of a first name prevents definite attribution of the mark, but there are five possible Bristol makers in the second half of the century. These are:
Jonas jr; F 1747, fl Bristol 1754, fl London 1774-84;
John, brother of Jonas jr; A 1740, F 1747;
Joseph sr, another brother; F 1747, fl 1792;
John, not known to be a relative of the others; F 1784, fl London 1784-1812.

The highly ornate stem-fragment attributable to Anna Viner (fig b) at Bristol (from Barrow Gurney on the SW outskirts of the city) and the slogan-inscribed Okely family stems from the Stroud area described above are typical enough examples of C19 pipes, with nothing sufficiently distinctive to suggest specifically Bristol traits. As noted earlier, the London-derived bowl-forms of Oswald's type 11 series are spreading all over England in the last quarter or so of the C18 indicating the dying out of most regional forms. With their disappearance, the tracing of movements such as those of the Bristol makers noted above becomes almost impossible.

It may be suspected that Ducy, Thomas Bickham, Huish, and James made pipes where they settled, but little is known about those who went to the London area. John Frederick Bryant jr was recorded in the poll-books as a pipemaker when we know from his autobiography he had set up in the stationary business, suggesting that the appellation "pipemaker" in the poll-books simply refers to the trade in which the voter had originally taken his freedom; on the other hand we also know from Bryant's account that Samuel Richards jr, a Bristolian, had an apparently prosperous pipemaking business in Woolwich in the 1770s. We also know that Bryant had worked as a pipemaker when he could find such work, and the addresses given for Bristol pipemakers in the London area are frequently in known pipemaking areas (see Section V above).

Bristol pipemakers living in the London area appear to die out in the first decades of the C19, to judge by the poll-book entries: from a total of 21 in 1784 the number had dropped to three by 1812 and one by 1830. The three who did survive into the C19 - Isaac Bickman, Thomas Cole, and John Edwards - do appear to have set up in some sort of permanent occupation, for all had been in London from the 1780s at least: Bickmam and Cole had arrived by 1781 and Edwards by 1784, and it is Bickham who is still recorded in 1830. Edwards, however, ultimately returned to Bristol in the 1810s, for after being recorded at London in the 1812 polls he appears in Bristol in the 1818 polls. Of the Bristol pipemakers who made their way to London, however, only two are actually known with some certainty to have continued pipemaking there. The Samuel Lewis noted working in Southwark 1799-1805

(Oswald 1960a: 80 and Bloice in Atkinson and Oswald 1969: 211) is probably the Samuel Lewis F 1774 and working in London in that year, in Lambeth in 1781, and Southwark in 1784; while the William Russell noted in London in 1805 (Oswald 1960a: 91) is possibly the William Russell A 1757 F 1768 and voting from London in 1774, 1781, and 1784. It is just possible that the William Okeley [sic] noted in London in 1836 (Bloice in Atkinson and Oswald 1969: 222) is the William Okely working in Bristol first with his mother Martha and then by himself 1806-27; his wife is known to have been called Amelia, and a Mrs Amelia Oakley [sic] is listed in London 1850-57 to be succeeded in 1858 by an Alfred Oakley, presumably a son (Bloice *loc. cit.*). It is also possible that the William Lan(d)sdown recorded in London 1832-48 (Oswald 1960a: 81 and Bloice *loc. cit.*) is a son of the William Lan(d)sdown who became free in 1784 and voted in that year from London. All in all, however, there is no real evidence to suggest the migration of Bristol pipemakers in the second half of the C18 involved a spread of Bristol's pipemaking traditions.

One can, however, talk with some confidence of Bristol pipemakers establishing the industry in South Wales in the early C19. John Frederick Bryant jr in the early 1780s had travelled to Swansea in an unsuccessful attempt to buy a derelict pipemaking premises there because he knew the area to be a good potential market with no makers (Bryant 1787: xxvi-xxvii); and in the C19 at least three Bristolians succeeded where Bryant had failed. Nicholas Kennicott, a pipemaker who became free in Bristol in 1809 and who is recorded there 1810-12, had moved to Swansea by 1830, for the Bristol poll-book for that year lists him as a pipemaker resident there; and an Edward and Nicholas Kennicott, perhaps sons rather than father and son, are listed as pipemakers at Hafod, Swansea - the only Swansea pipemakers listed - in Hunt and Co's *City of Bristol, Newport and Welch [sic] Towns Directory* for 1848 and Scammell and Co's *Gloucester, Bristol and South Wales Directory* for 1853 (I am endebted to Swansea Public Library for the 1848 reference; they have been unable to find other references in surviving directories and voters' lists). The same 1830 poll-book lists a Samuel Richards of Bristol as a pipemaker resident in Swansea - this is presumably Samuel Richards III, F 1812, the fourth generation of his family to make pipes, but whose business (or whose family's business) is not recorded in Bristol after 1817.

That there was pipemaking in Swansea at the beginning of the C18 is suggested by a port book entry recording *The Queen's Peace* of Chester leaving Swansea for San Sebastian with a cargo including 12 gross tobacco-pipes (assuming the pipes had not originally been brought from Chester, which was a known pipemaking centre - see 4: IiI), and the derelict business Bryant had tried to buy indicates pipemaking there in the later C18; but the *New Swansea Guide* of 1823, illustrating the recent increase of the city's trade, noted (p.23) that whereas there had been no exports of pipes in 1812, 601 boxes of pipes had been exported in 1819. This latter comment adds weight to Bryant's observation in the early 1780s that Swansea was a good potential market and suggests indeed that Kennicott and Richards may have re-established the Swansea pipe industry if they settled there immediately after their last appearance in the Bristol trade directories.

Also listed in the 1830 Bristol poll-book is a William Roberts, a pipemaker voting from Cardiff. This Roberts is otherwise unknown in the

Bristol records and his freedom (if he ever took it) does not appear to have been recorded, but there was a whole family of Robertses pipemakers in Bristol in the earlier and middle C19 and William may have been one of them who decided to seek his fortune elsewhere and settled in the rapidly-rising port of Cardiff. In any event, his presence in South Wales again emphasizes the connections between Bristol and that area.

Further, the Pardoe family who took over the Nantgarw porcelain and pottery factory near Cardiff ca.1833 and concentrated on pipemaking until the factory closed in 1920 returned there from Bristol. The family were originally from Derby and Thomas Pardoe (B 1770) had been a ceramics painter there and at Worcester (and perhaps Staffordshire) and Swansea before setting up in Bristol as an independent enameller from 1809 to 1821, when he went to Nantgarw. That business failed the following year and Pardoe died a year later; but his son William Henry, who had worked at Nantgarw with his father and then returned to Bristol, was still interested in the ceramics trade, for in 1826 he set up in Cardiff as an earthenware painter with his own muffle-kiln and also as a pipemaker (a load of pipeclay arriving in Cardiff in 1826 from Teignmouth is probably for him). He was still in Cardiff in 1830 when he is described as a dealer in china and glass as well as a tobacco-pipe manufacturer, and another reference to him of about this time refers to him as a grocer as well.

Shortly after this, however, as noted above, he had moved his pottery and pipemaking business to Nantgarw and started to concentrate on production of the latter, running the business from then until his death in 1867. That William Henry Pardoe continued his Bristol connections, however, is indicated by his being listed as a pipemaker and potter at Avon St, St Phillip's, Bristol, in the 1840s and 1850s, to be succeeded there by C. and G. Pardoe listed in 1863. (The history of the Pardoe family and businesses is complex: see Jewitt 1878: I, 439-51; I.J. Williams 1932: passim; Nance 1942: 412-7, 480-7.)

(b) ABROAD (1) Introduction

The other aspect of Bristol trade which bears upon the subject is oversea trade, and it is in this field that Bristol's chief fame lies - cloth, the Cabots, tobacco, the slave trade, sugar, rum. The history of Bristol as a port has been dealt with by many writers in a still greater number of books; indeed, if one can make a criticism of historians writing on Bristol it is that they have concentrated more on the port than on the social history and growth of the city.

For the almost one thousand years of its existence Bristol has been primarily a port, with especial interest in the Atlantic seaboard - the first written reference to Bristol is in 1051 when two of the outlawed Earl Goodwin's sons fled by ship from Bristol to the friendly Norse settlers of Dublin, while 13 years later Harold son of Goodwin, now restored to favour, sailed from Bristol during his series of expeditions against the Welsh. That there were Dublin connections with the Bristol Channel area by ca.1000 is suggested by the Dublin mint's modelling coins after those made at Bath and Watchet and by a Gloucester and a Bath coin hoarded about this time in different places in Ireland. The establishment of a mint at Bristol at the beginning of the C11, although known only from numismatic evidence, suggests a trading post of some importance, perhaps associated with the shipping of slaves to Ireland, referred to in the second half of the C11 as "a very ancient custom."

If the Irish trade is Bristol's oldest, that with France in wines and Flanders in woad had been established by the end of the C12, and by the end of the C13 trade with Spain and Portugal is noted (cf Quesne-Bird 1972a). Trade with some of these areas still forms part of Bristol's economy - wines from France and Iberia and Dublin-made Guinness for the South-West (the rest of England south of the Wash has to make do with London-brewed Guinness (Guinness Ltd in litt. 4 September 1968)). This traditionalism is a recurrent theme in Bristol trading history, as is its tendency to import more than it exports, a feature noticeable from medieval times. (Archaeologically, the English wine trade with western France is probably reflected in the finding of Saintonge wares from the area of France - ca.50 miles north of Bordeaux - from English sites particularly on the English and Bristol Channels and as far north as Yorkshire. Bristol is among these sites (K.J. Barton 1963: 212, 214 and refs). The extent of medieval trade between Bristol and Ireland is being revealed by the quantity of Bristol-area pottery being found in the major excavations now in progress in Dublin (Ó Ríordáin 1969: 25), and the occurrence of C12-C13 Ham Green ware from the kiln near Pill at Dublin and Cork and of frilled-neck late C13-early C14 jugs from somewhere in the Bristol hinterland in considerable concentration in Co. Down and Co. Antrim and scattered elsewhere in eastern Ireland has already been noted (pp590-1 above); but medieval trade has left a more remarkable archaeological record - the appearance of Dundry oolitic limestone, and occasionally other Cotswold oolites, in buildings of the period ca.1175-1400 in south and east Ireland within easy reach of sea and river transport, from Drogheda north of Dublin to Kinsale west of Cork (Waterman 1970; cf M.Q. Smith 1970: 15).)

In the C15 the evidence which survives suggests Bristol was appreciably less prosperous than it had been the previous century, but a sign of broadening maritime horizons was the contacts with Iceland to the north and Madeira and the Mediterranean to the south, culminating with the first recorded voyage of Atlantic exploration from Bristol, one of 1480 to find the island of "Brasylle", the first of several and all well before the Cabots. Indeed, there is good evidence that Bristol sailors, who like Columbus had probably heard of the New World through their Iceland contacts, reached North America several years before John Cabot's voyage in 1497. Between then and 1509, when Sebastian Cabot voyaged as far north as Hudson Bay and then well south along the American eastern seaboard, Bristol merchants attempted to exploit the newly-discovered lands, but nothing permanent resulted apart from the Newfoundland fisheries, and indeed from 1500 onwards Bristol appears to have been declining from its place of preeminence, Norwich taking its place as the wealthiest city in England after London (the preceding paragraphs are based on Carus Wilson 1933a; 1933b; 1937; Little 1954, 1967 ed; Williamson 1962: chapts I and II; Sherborne 1965; Quinn 1968).

As the C16 progressed Bristol further declined. Iberian ports had been replacing French ports in importance in Bristol trade following England's loss of her French possessions in the middle of the previous century, and as late as 1580 a large percentage of Bristol ships were clearing for Spain, but the increasingly strained relations between Spain and England, culminating in the Armada in 1588, broke that trade. What French trade there was was disrupted at this time by the French Wars of Religion, and Ireland was in revolt at the end of the century. In the late C16 therefore Bristol was in a poor state economically (Latimer 1900: 1; Little 1954: 106-7, 1967 ed).

Bristol's chief interest lay in finding permanent, stable markets for her goods and similarly safe sources for imports for her traditional manufactures. Cloth and lead were Bristol exports ready for a market; for imports Virginia was suggested as a safer source of the goods hitherto obtained from France and Iberia - olive oil, hides, citrus fruit, wines, and wood. Train oil from cod taken in the Newfoundland fishing was suggested as an alternative to olive oil from Spain for the traditional industry of soapmaking, though the resulting smell was such that legal action was taken to enforce a return to olives. For these reasons, therefore, Bristol even in the depression at the end of the C16 did give some support to voyages of exploration to the New World, for example those of Sir Humphrey Gilbert.

The first half of the C17 appears to have been a time of fluctuating, and on the whole mixed, fortunes for Bristol. Peace with Spain following the accession of James I in 1603 resulted in sailings to and from Iberia and the Atlantic islands returning to 1560s levels by 1610, and in 1618 trade was resumed with the Levant. Between the 1590s and 1620s John Whitson traded with Danzig, Hamburg, Amsterdam, Ireland, France, Spain, Portugal, Italy, Greece, and on one occasion Barbary, and helped finance one voyage to New England (McGrath 1970: 11-12). However, customs revenues for the period 1614-20 place Bristol only third among the outports, with an average income of £3,706 compared to £7,259 for Kingston upon Hull and £4,533 for Exeter (Newcastle upon Tyne came next after Bristol, with a figure of £3,310); and while there appears to have been a boom following the peace with Spain in 1604 - the Society of Merchant Venturers was reorganized in 1605 - and up to ca.1610-12, this appears to have been followed by a prolonged recession, the cloth trade, for example, declining until 1628-29 and thereafter fluctuating, never reaching before the Civil Wars anywhere near the levels of the middle of James's reign. Bristol trade was at a particularly low level in the period 1625-29, during the wars with Spain and France, and though there was some recovery in the 1630s, the Civil Wars, 1641-49, with their two sieges of the city and protracted rebellion in Ireland, set the city and its trade back once more, though the absence of port-books for this period makes an accurate estimate of the extent difficult (Stephens 1975: 156-60; McGrath (ed) 1955: xviii-xxi, 1968 ed). In addition, the increasing number of monopolies granted Londoners up to the end of the 1630s affected Bristol trade and industry adversely (see Section I above).

Contemporary comments, however, suggest an underlying recovery in the first half of the C17 from the nadir of the late C16: as early as 1611 Bristol was referred to as the second city in the kingdom and in 1634 an observer noted that this "rich city" was thronged by "Londoners, Irish, and others" for the January and July semi-annual fairs and concluded the city "to be reputed inferior to few except London" (both quotations in Bridenbaugh 1968: 129 n.17 and 129-30). It is true that Bristol's own attempts to found colonies in Newfoundland and Maine met with indifferent success and that Capt James, though he explored much of Hudson Bay and the bay to which he gave his name, failed to find the North-West Passage; but safe and stable markets in North America and the West Indies were opening up, the valuable London tobacco monopoly was revoked in 1639, and Bristol was well situated geographically to take advantage of the expanding English colonies (for the early C17 Newfoundland colonies partly or wholly backed by Bristol see Cell 1969: chapts IV and V). It is against this increasingly favourable background that the Bristol pipe industry commenced and developed. (The Bristol settlement and its successors at Pemaquid, Maine (MacInnes 1939: 105, 151; 1965: 19-20), are at present being excavated - brief interim reports and studies have appeared (A.H. Young 1965; H. Camp 1966a; 1966b; 1966c; 1968; M. Camp 1966; also "Pemaquid Lost and Found", paper given by Mrs H. Camp at autumn 1970 conference of Council For Northeast Historical Archaeology, Ringwood, New Jersey). Brief exploratory excavations at Ferryland, Newfoundland, site of Lord Baltimore's settlement of 1621 and a port-of-call for the Bristol Newfoundland fishing fleet (MacInnes 1939: 242-3; Cell 1969: passim), have also been made (Harper 1960).)

In 1619, James I, wanting English settlers for Waterford in Ireland, which he was about to incorporate, advertised in Bristol for prospective settlers worth at least £500 and preferably £1,000. There is no evidence that anyone from Bristol was lured (Latimer 1900: 71), but it would have been surprising had some settlers from a city with such old-established trading links with Ireland not gone; and in fact one of the Englishmen kept in Waterford by the Irish because his trade was useful to them when most English were being expelled or killed during the 1641 rebellion was a Bristol pipemaker, Edward Abbott (Nott and Ralph (eds): 117-8, 172, 174), who must have settled there if not in 1619 then subsequently.

From the early 1650s, however, after the Civil Wars, and despite the First Dutch War and war with Spain, Bristol began a steady expansion both in trade and in industry (for trade see McGrath (ed) 1955: xx-xxii, 1968 ed; Stephens 1975: 160-1). About 1650 both the Bristol glass industry (Buckley 1925) and the tin-glaze earthenware industry (Pountney 1920: 4, 23-9; Pritchard 1926: 262) appear to have started - a tin-glaze fragment with the date 1647 is known from the site of the Brislington factory - and of course the pipemakers' guild was formed in 1652. By the early 1650s Bristol had regular sailings to France, Portugal, Spain, and the Mediterranean as well as across the Atlantic to Newfoundland, Virginia, and the West Indies; in 1663 a Carolinas settlement was given a charter by Charles II and a flourishing trade sprang up with that colony (Latimer 1900: 317-8). Despite a rapid increase in trade with Iberia, particularly in sherry, it was the New World trade, and in particular the Virginia tobacco trade which contributed most to Bristol's prosperity, and by early in the second half of the C17 Bristol was certainly the second port in England and disputing the title of second city with Norwich, whose size she was definitely to exceed by the early C18. Excavations at St Nicholas's Almshouses in King St revealed in a deposit of material datable to 1652-56 ceramics which gave some indication of Bristol's trading wealth. Besides the German stoneware, Dutch delft, and Hispano-Moresque wares relatively commonly found on C16 and

C17 English sites, Italian Montelupo maiolica, known elsewhere in England only from Plymouth, Exeter, and London; and Hamburg faience, not so far known from elsewhere in England, occurred (K.J. Barton 1965: 193). By 1677 Bristol as a port was second only to London in terms of customs duties collected, the 12 months ending Michaelmas yielding £50,946 from Bristol compared to £21,480 for Kingston upon Hull and £19,921 for Exeter, the next two ports on the list. Liverpool was still far down the list, with only £3,507 duties, but the overwhelmingly dominant position of London as the nation's first port is emphasized by duties there totalling £597,704 - almost 12 times that of Bristol (Latimer 1900: 383). This growth of Bristol trade was primarily based on her trade with the American colonies and the West Indies, together with a recovery of the Irish trade; for she did not increase her share of the Newfoundland fisheries, and her French trade, hit by embargoes and wars, brought in considerably less wine than earlier in the century (Stephens 1975: 160-1). Thus Bristol's increasing dependence on the American colonial and West Indian trade, and latterly specifically the latter, which ultimately was to contribute to her downfall at the end of the C18 (see below), was already becoming visible early in her growth.

The Huguenot settlement in the 1680s came from the area centred on La Rochelle, where Bristol had had trading connections since the Middle Ages, and a reflection on the conservatism of Bristol and its manufactures is that these settlers adopted (for in a number of cases it is known they had followed a different trade in France) the wool and cloth trade traditional to Bristol for centuries rather than introducing new industries (Lart (ed) 1912: passim).

The C18 saw the zenith of Bristol's fortune as a port, and for most of the century she was the second city in England both in size and wealth. However, signs of a relative decline compared to other ports were appearing in the second half of the century. The opening of the Africa slave trade in 1698 allowed Bristol to enter this trade, in which she expanded until ca.1740, but after this date Liverpool increasingly took over this field and by the end of the century Bristol's interest in it was virtually dead. The Virginia trade expanded during the earlier part of the century, but was in decline during the latter half and received a blow with the American Revolution from which it did not recover - Liverpool, then Whitehaven, then Glasgow, progressively took over the Virginia tobacco trade. Bristol's Newfoundland fishing trade declined as the century progressed, other West Country ports such as Teignmouth, Dartmouth, and particularly Poole taking over more and more - in the Christmas quarter of 1757 cargoes to Newfoundland from Poole included tobacco pipes (Mathews 1958: 48-9, 41-2; cf Andrews 1955: 107-8). Poole was also trading particularly with South Carolina and especially in rice, which is known to have been reshipped to Bristol from Poole (Mathews 1958: 48-9). The Irish, Spanish, and West Indies trade increased during the greater part of the century, but after 1700 British trade generally with Iberia declined (Mathews 1958: 25) and in 1778 Ireland was allowed to trade directly with the Plantations and also to export woolen goods without restriction (Ashton 1955: 156, 1961 ed) - hitherto all Irish imports and exports had had to be reshipped from English ports under the Navigation Acts - so that by the later part of the century Bristol merchants were relying dangerously on the West Indies trade, though it too was already showing signs of decline.

An examination of a study of Anglo-American trade figures in the earlier C18 (Andrews 1955) enables a closer study to be made of Brisol and other interests in the North American trade, and the extent of Bristol's specialization, and hence in part the delicate nature of its prosperity, becomes apparent. For example, total trade between England and North America was small - ca.8% with the eastern seaboard states and ca.15% with the West Indies. Thus Bristol even at the height of its prosperity was concentrating on only a small part of the English trading economy. Further, London, by far the most important of all the English ports, handled in 1715 67% of all North American (excluding West Indian) imports, the same percentage of North American exports, and 66% of the re-exports. London's share of the North American trade was greatest (100% in the Hudson Bay traffic, though this is an artificial example as in 1715 Hudson Bay had no exports recorded and took only £1,800 of imports) but her 80% share in the New England trade represents dominance of a major market. London's share in the Virginia-Maryland market is unfortunately not given, but it is noted that the areas with least London trade were Carolina (with "only" 48%) and Newfoundland with 8 per cent.

Thus even in her special field of North American trade Bristol lay far behind London in volume: even trade with the tobacco-rich states of Virginia and Maryland must have been much more London-dominated than Bristol-dominated (cf I. Noël Hume's remark (1963: 264) that Bristol seems to have been the principal source of the white clay pipes found in Virginia ca.1660-1775 with Atkinson and Oswald's observations (1969: 205) that at least at Williamsburg, the colonial capital of Virginia, London pipemakers seem to have had a large proportion of the trade - in fact, as the distribution maps FIGS 160-63 indicate, the Williamsburg-Jamestown area has produced a very considerable quantity of various Bristol pipes, but published excavations of sites dating from the mid-C17 up to ca.1772 both in the Tidewater area round Williamsburg (Caywood 1955b; Kelso 1966; 1969; I. Noël Hume 1962; 1966a; 1966b) and from Williamsburg itself (A. Noël Hume 1973) suggest progressively more London pipe-material so that by the C18 it is overwhelmingly predominant).[66] However, in terms of percentage of total tonnage exported, Bristol's North American exports formed an appreciably greater proportion of that port's exports than did that of London as a proportion of its exports, ca.25% of Bristol's export tonnage going to North America. Of that, two-thirds went to Virginia, Maryland, and the Carolinas, and most of the rest went to New England, New York, and Pennsylvania. Newfoundland took the small remainder, the bulk of the Newfoundland export trade coming from certain smaller West Country ports such as Bideford, Barnstaple, Lyme Regis, and particularly Poole, whose entire North American trade that year was with Newfoundland. Thus not only was Bristol's rising prosperity founded on a very narrow base but it was on a base that was by no means an exclusively Bristol sphere of influence.

Further, in 1715 over 50% by value of England imports from North America was tobacco, Virginia shipping about two-thirds of the colonies' tobacco and Maryland approximately the other third. Tobacco made up 95% of the exports of these two colonies, yet economically it was a wasteful crop because it exhausted the soil after three years, necessitating the continual opening up of new land. From different aspects, therefore, it can be seen that Bristol's North American trade was set neither on a secure nor a diversified basis. As with its medieval trade in French and Iberian wines, Bristol relied on a predominantly luxury import market to achieve its prosperity, and again as in medieval times consistently imported more than it exported (cf Minchinton 1962: 7-8). With the hindsight of history therefore, it can be said that Bristol's economic prosperity was vulnerable to ports with a greater variety of trade or a more prosperous hinterland or superior harbour facilities or any combination of these (cf MacInnes 1939: 358). Probably for this reason Bristol's trade tended to decline in time of war (Minchinton 1957: x); Liverpool's, on the other hand, tended to thrive during the wars at the turn of the C18 (see 4: II).

However, in the earlier C18 Bristol was both the second city and the second port in England. An analysis of outgoing cargoes (excluding those to Ireland) in 1715 indicates that in shipments to Asia, Africa, and America, Bristol was ahead of Liverpool and second only to London; and that it ranked approximately second equal after London with Great Yarmouth, Newcastle, and (rather surprisingly) Fowey in trade with southern Europe - an area defined as Europe west and south of Calais and including the Channel Islands, the Canary Islands, and Maderia. Trade with Flanders, The Netherlands, and NW Germany; and with Scandinavia and the Baltic was small, however: Bristol had appreciably less with the former area than did Liverpool, and about the same with the latter area (Andrews 1970: 204 fig 6). During the period 1700-60 Irish imports from England trebled and Irish exports almost doubled, England importing more from Ireland than from any other European country (Ashton 1955: 156, 1961 ed cf Defoe's remarks on Bristol's Irish trade during the period ca.1690-1720, quoted in Marcy 1966: 2): as noted above, all Irish imports had to pass through English ports until 1778 and Bristol was traditionally the major shipping centre for Ireland.

There is certainly evidence that Bristol profited from this position earlier, for at the end of the C17 the Customs Farmers in Ireland recommended direct shipment there of tobacco to avoid the corruptness of the Bristol re-export trade (Tyack 1935b: 197). The most frequented Irish ports were Dublin and the southern ports of Cork, Limerick, Waterford, and Youghal, the latter group also being used as victualling stations by Bristol vessels on the Atlantic runs. As there had been a Bristol pipemaker active in Waterford in the earlier C17 so there was a Bristol glassmaker active in the 1760s and 1770s in Dublin (Buckley 1925: 47). The enterprise, which was connected with a short-lived glass enterprise at Chepstow, does not appear to have been particularly successful, but in view of the evidence for heavy Bristol investment in South Wales in the C18 and scattered investment elsewhere (Minchinton 1954: 82-5) similar investment in Ireland was probably not limited to the isolated example cited here.

In the C18 the West Indies trade became the most important for Bristol, and for that reason rum, molasses, and above all sugar, became Bristol's chief imports, displacing tobacco from its position held in the latter part of the previous century, though the North American trade continued. In return Bristol exported clothing and materials, including glass, for building houses, mills, and distilleries, and tools for manufacturing and farming - Bristol bricks and tiles, it was said, were the chief ballast of

West Indies ships. Jamaica was the most important centre for the West Indies trade. Fish and train-oil from the Newfoundland fisheries went directly to Iberia and the Mediterranean, the ships returning with the traditional goods of these areas - a variant of the triangular trade. Wool for the Bristol cloth industry was a new addition to imports from this area. The copper and brass works founded at the beginning of the century at Baptist Mills and elsewhere made trinkets for the African trade, which also took cotton, linen, spirits, muskets, and ammunition. Ireland sent dairy produce and food, leather, hides, and timber and received in return manufactured goods and colonial produce. Trade into the Baltic generally went out either in ballast or with colonial produce; return trade (often in foreign ships) comprised grain, iron, timber, sawn lumber, and ships' stores (cf Quesne-Bird 1972b).

With her withdrawal from the slave trade by the end of the C18, the loss of much of the American trade following the American Revolution, and the lessening in varying amounts of the Newfoundland, Iberian, and Irish trade towards the end of the century most of Bristol's wealth became concentrated in the West Indies trade, particularly in sugar, and many of her merchants owned plantations there. The value of the West Indies trade can be appreciated when it is realized that in the beginning of the 1790s Bristol was said to be more prosperous, despite the decline in so much of the rest of her trade, than ever before (Minchinton 1957: xi); the West Indies trade was worth twice as much as all other oversea trade combined (MacInnes 1939: 358).

There were a number of reasons for the relative decline of Bristol at the end of the C18 and the loss of the pre-eminence it had enjoyed for most of that century, and these have been summarized by MacInnes (1939: 358-63) and by Minchinton (1957: ix-xvi; also 1962: passim). By 1800 Bristol had slipped to eighth among the outports in vessels, tonnage, and men, the first four ports being Liverpool, Newcastle, Hull, and Sunderland (Ashton 1955: 144-5, 1961 ed), and though its population had increased between two and three times between 1700 and 1800, Manchester, Liverpool, and Birmingham had all surpassed Bristol by the latter date. About 1700 Bristol's population was in the 20,000s (Minchinton 1954: 74, repeated in 1957: ix and 1962: 1 says ca.20,000; Little 1954: 327, 1967 ed says ca.27,000 and Latimer 1893: 194 estimates ca.23,000 in 1712); in 1801, at the first census, the figure was 66,923 including Bedminster, plus an unknown number of evaders. Liverpool by contrast had increased its population from an estimated 6,000 in 1700 to some 77,000 in 1801 (see 4: II). (There is a discussion of estimates of Bristol population in the C18 in Little 1954: 326-8, 1967 ed, and other estimates are noted in Latimer 1893: 194, 292 and Marcy 1966: 4-6).

Basically, the ports which had overtaken Bristol were either more resilient to adversity, more speculative in their trade, or had greater potential and diversification of trade, industry, and hinterland (cf P. Marshall 1968: 22-3); and as Minchinton notes (1957: xvi), once ground had been lost it was difficult to prevent the decline continuing: in 1800 it was noted that "several cargoes of West Indian and American produce have recently been imported into this city from Liverpool" (quoted in Minchinton 1962: 21). As early as 1765 Liverpool had vastly more ships entering and leaving her port than had Bristol, and in 1788 it was noted that customs receipts at Liverpool had "for some time past" exceeded those of Bristol (both noted in Marcy 1966: 4); indeed, elsewhere Marcy suggests Liverpool had overtaken Bristol before mid-century (1969: 149).

Thus for the earlier part of the C19 Bristol trade was in a difficult period, with her old markets gone to a considerable extent and new ones not yet emerged. Traditional Bristol industries such as sugar, brass, and glass survived the American Revolution and Napoleonic Wars only to decline in the C19 partly because of changing general patterns in industrial Britain, partly because of lack of local enterprise, and partly because of outdated production methods (Alford 1968; 1973: 90-1; Stiles 1969; Buchanan and Cossons 1969: 67-9, 121). The brass industry was dying throughout the C19 while the sugar and glass industries, after achieving some prosperity in the earlier C19, similarly fell into a protracted and final decline. The city, which had always tended to a traditional and defensive position on changes likely not to be beneficial to its interests, went through a period of fruitlessly fighting for the old economic order that Adam Smith had denounced, culminating in the stand against the abolition of slavery with its inevitable effect on the West Indies plantations and trade closely linked to Bristol; and the Bristol West India Association continued to protest the passing of the good old days until it was disbanded in 1857, almost a quarter of a century after slavery had been abolished.

When the long-mooted harbour improvements did come in 1809 they were neither adequate in size nor soon enough in time to stimulate a port which had lost its traditional Midlands trade and all that would have meant in the last part of the century with the completion in 1777 of the Grand Trunk Canal and its connection to the Mersey and Liverpool; and as improvements they were minor compared to the East London docks being constructed at this time. London in fact was getting its Avonmouth and Portishead two generations before Bristol (Avonmouth Dock was finished in 1877, Portishead in 1879), though it is only fair to note that the East London docks were much nearer to London than Avonmouth and Portishead were to Bristol. Brunel's steamers the Great Western and the Great Britain, launched in Bristol in 1837 and 1843 respectively, had to move to Liverpool for their transatlantic runs, for they were too big to use the Floating Harbour - indeed the Great Britain, of 3,270 gross tonnage and 322 ft long, barely got out of the harbour at all and was stuck there for over a year. Grounding of ships in the narrow and winding course of the Avon up to Bristol - a channel called a "mere ditch" by the nearly-stranded Admiral Plumleigh in 1630 and referred to in 1767 by William Campion as the "present contemptible channel" - continued as late as the 1870s (photographs in Winstone 1965: pls 134-6, 138, 150; 1968b: pls 122-3) as the City Docks struggled to accomodate the ever-increasing size of shipping now being used for world trade.

Excessive dock charges compounded the problem (cf Marcy 1969: 165-6; Buchanan 1960a: 204; 1971: 2; 1972: 41 and 44): in 1833 linen cost about six times as much to unload in Bristol as in London or Hull and in the 1840s, on 40 major non-edible articles the port charges were 5s5-1/2d more at Bristol than at Liverpool, ca.8s more than at Hull, and even more above that charged by the rapidly-expanding rival ports in South Wales. About this period taxes on vessels and goods entering Bristol were on the average more than double the corresponding taxes in Liverpool or London, and on tobacco Bristol merchants had to pay a total of 3s a hogshead compared to 5d in Liverpool (Alford 1973: 39). It is not surprising that Wiltshire clothiers shipped through Liverpool instead of Bristol. Similarly, the Bristol cotton industry established in 1838 ran into difficulties because it proved more expensive to bring cotton through the port of Bristol and to the factory which stood on the Feeder Canal than it was to bring the cotton by rail from Liverpool (Buchanan and Cossons 1969: 137-8).

When, therefore, Bristol's fortunes began to rise again it was with the rationalization of the harbour facilities at the mouth of the Avon, the uniting of the rival Avonmouth and Portishead docks with the City Docks under the city corporation which bought out the former two docks, the final curbing of the last die-hards who continued to favour the City Docks, the abandoning of the docization schemes, and the building of the Royal Edward Dock between 1902 and 1908 which approximately doubled the size of the Avonmouth Docks; and it was on the diversified world trade of the C20 rather than on traditional products (though Bristol is still the chief wine port after London) that prosperity was built. By the turn of the C19, however, the clay tobacco-pipe industry had collapsed, and in fact only three firms struggled into the C20, the last closing in 1921. (Where otherwise unnoted, material in this section is based largely on MacInnes 1939 and Little 1954, 1967 ed).

For convenience, Bristol's oversea trade in pipes will be divided into three sections - Europe, Africa, and North America including the Caribbean.

(2) Europe

As has been noted above, Bristol has had close commercial contacts with Ireland, particularly with south and east Ireland, for the thousand years the city is known to have existed. Although there is evidence (1: VII(a) and 4: IV, in Glasgow section) that the popular means of tobacco-taking in Ireland from before 1650 to at least the second half of the C18 was in the form of snuff and that the Irish clay-pipe industry does not appear to have reached any importance before the earlier C19, pipes, including Bristol-made pipes, were being used in Ireland from the earlier C17 at least. Pipes dating to the C17 and C19 have been found on excavations in Ireland (e.g. Croker 1835: passim; Anonymous 1855; Fitzgerald 1855: 307-8, 304 lower illus; Wilde 1863: 159-60; Ronayne 1903; Rynne 1964: passim; Addyman 1965: 93, 94, 99 fig 11 nos 3-4; Rynne 1967: 34 and n.6); but as Rynne notes (1964: 256), no work has been done on Irish pipes nor have well-dated deposits been excavated that would enable typological studies to be made.

A charge laid against Strafford at his impeachment in 1641 was that he had instituted a monopoly on tobacco-pipes in Ireland, but the charge was never discussed (Miss C.V. Wedgwood in litt. 20 January 1969). However, pipes were being sent to Ireland from Bristol by 1637 (Kearney 1959: 136-7), though the amount noted, ten score, is perhaps a mistake for ten gross. Edward Abbott, a founder-member of the Bristol pipemakers' guild in 1652, was a pipemaker in Waterford when the Irish rebellion broke out in 1641, and owed his security to his trade, for the Irish expelled all Englishmen except for a few, including Abbott, whose skills were considered necessary to retain. (Whether Abbott was a Bristolian prior to working in Waterford is uncertain: in 1619, when Waterford was incorporated, there was an appeal to Bristol citizens with useful trades to settle there (Latimer 1900: 71) and while there is no record of anyone doing so it would not be surprising if Abbott moved there at some time from Bristol.)

In 1666 a Col William Legge appealed for a grant to make and sell tobacco-pipes in Ireland (T.P. Cooper 1907: 104; SPD Chas. II 16 Aug 1666), but nothing further is recorded. (Presumably this is the Royalist Col William Legge, 1609?-1672, noted in the DNB; he was an Irishman.) Bristol pipes were certainly reaching Ireland at this time, for an example marked John Hunt was excavated in Dublin (Anonymous 1855) and one marked Flower Hunt was in the museum of the Kilkenny and South-East Ireland Archaeological Society (Fitzgerald 1855: 309-10 editor's note).[67] (John Hunt became free 1651 and is noted in 1653, Flower Hunt also became free in 1651 and died sometime between 1670 and 1672.) Further, at least two of the pipes from Yougal illustrated by Fitzgerald (1855: 304 lower illus, two on rt) are of shapes typical of Bristol pipes made in the mid-C17 - cf, for example, the pipe second from the rt with products of Richard Berryman (fl 1619-52) and Edward Lewis (fl 1631-40/1, app D by 1652) and the pipe on the extreme rt with products of Thomas Monkes (fl 1656-69/70) and Philip Edwards sr (fl 1649/50-68/9, D by 1683) - and the two bowl-shapes depicted by Wilde (1863: 159 fig 115 nos 15 and 16) and described as "the two most frequent forms" found in Ireland are respectively the mid-C17 chinned bowl typical of Hunt and other West Country pipes and a ca.1700 early West Country type 9 form.

Apart from Kearney's reference to pipes being shipped to Ireland from Bristol in 1637 noted above the only printed notice of Bristol pipes going to Ireland is the two boxes going to Cork in the Hester 17 June 1720 noted by Minchinton (1957: 78), but there can be little doubt that Bristol pipes were shipped to Ireland far more frequently than these isolated references would suggest. There was still a market in Ireland for Bristol pipes at the end of the century, for an advertisement of 1799 among the pages of the Bristol Pipemakers' Guild Book lists among other markets for which pipes were produced "the Irish and Spanish markets", pipes for this trade being listed at 1s, 1s2d, and 1s3d a gross. The advertisement was signed by Anna Viner, John Carey, Joseph Edwards jr, and Samuel Richards jr, four of the six Bristol pipemakers known to have been in business at this date. Details of this trade may have to await a survey of the Port Books, however, for little post-medieval archaeology has so far been undertaken in Ireland and that country is not well-endowed with museums, there being only three in Northern Ireland and four in Eire (I am extremely grateful to two of these, the County Museum, Armagh, Northern Ireland, and the Cork Public Museum, Cork, Eire, for sending me respectively drawings and a photograph of the pipes in their collections. The Cork material was all C19, as was most of that from Armagh, but the latter did include several C17 specimens, including two belonging to the earlier part of the century, unfortunately unmarked).

So far as this writer is aware no finds of Bristol pipes have been recorded on the Continent. That Bristol pipes were exported to Europe is, however, indicated by scattered references in the C18. Under the heading "Exports to Portugal and the Mediterranean: specimen entries" Minchinton

(1957: 10) lists 20 gross tobacco-pipes in one entry dated 16 January 1708/9 and 30 gross in an entry two days later, and at the end of the century 12 boxes of tobacco-pipes were specifically noted as going to Cadiz in the Joanna on 11 October 1790 (Minchinton (ed) 1957: 61). This latter entry bears out the reference in the 1799 advertisement noted above listing pipes "suitable for the Irish and Spanish markets" at 1s, 1s2d, and 1s3d a gross by Anna Viner, John Carey, Joseph Edwards jr, and Samuel Richards jr. Trade to Iberia in clay pipes can never have been high because of the overwhelming predominance of cigar-smoking there, but there must have been a steady minor market, for Oswald (1960a: 48) notes 100 gross pipes being shipped to Spain during the Michaelmas-Christmas period of 1698 (London is the port of origin meant, see Oswald 1959a: 59-60), and on 23 March 1714/5 The Queen's Peace of Chester left Swansea for San Sebastian with a cargo which included 12 gross pipes (Talbot 1969: 131). There is a shipment in 1700 from London of 18 gross pipes in a vessel bound for Corunna, the Gold Coast, and the Gulf of Guinea (Donnan (ed) 1935: 77) but it seems more likely the pipes would have been for the African slave trade (see section below) than for Corunna. That white clay tobacco-pipes have been found in Spain is indicated in Amador de los Ríos 1913, though then as now much medieval and post-medieval material tends to be called Roman in Spain.

Elsewhere, Bristol pipes are known to have reached Norway, for three boxes were shipped 8 May 1790 to Langesund in the Norway Lion (Minchinton (ed) 1957: 62). As noted in 3: VII the Danish, Norwegian, and Swedish pipe industries were started in the mid-C18 under the protection of tariffs on, or outright prohibition of, imported foreign pipes; but by the end of the century these native industries had largely failed. From bowl shapes and decorative motifs used in the industries of all three countries it is clear there was considerable English and Dutch influence, which confirms other evidence that both the English and Dutch exported pipes to Scandinavia prior to the mid-C18. The bans on imported pipes in Scandinavia and elsewhere certainly adversely affected the Dutch industry, which appears to have had a major Baltic trade, but as the native Scandinavian industries failed it was the more competitive German pipe industries which took over the northern markets. The 1790 reference to Bristol pipes being exported to Norway, however, indicates English pipes were once more reaching Scandinavia, and it seems quite possible that prior to the mid-C18 Bristol, which is noted above did have a minor Baltic trade, had traded pipes to northern Europe - in this context the introduction of the bianco sopra bianco decortive technique on delft into Bristol, probably to the Redcliff Pottery of Richard Frank, by Magnus Lundberg from the Rörstrand faïence factory in Sweden in the mid-C18 (Charleston 1963; Ray 1968: 52 and n.22) should be remembered. As already noted in 2: VII, the pipes produced in the second half of the C18 in Sweden were of English (though admittedly London) type 9 bowl shape. The maker's mark is described as being on the side of the bowl above the junction with the stem (Puktörne 1968: 77 and 79, 78 fig 5a and b), but unfortunately the drawings of the bowls do not show exactly where the mark is placed - if further up than the base it could be strongly reminiscent of the very characteristic Bristol marking of a cartouche in this position (see Appendix IX passim).

Friederich (1970: 164) talks of Bristol pipes being imported into The

Netherlands at the beginning of the C18, and illustrates (p.162 graph 1 btm pipe in col. 2, dated 1715) what he calls a typical example (cf 1964d: 4 no 16, where it is dated 1720). It is difficult to accept unreservedly all Friederich's statements in his various papers, and in this case, while the pipe illustrated certainly appears to be English, it is not of a shape particularly characteristic of Bristol pipes and it is unlikely to date as late as ca.1715-20 - it is of Oswald's type 7a (Oswald 1961: 59, 58) which he dates to ca.1670-1710 and in the opinion of this writer is more likely to date to the earlier part of that period.

For a number of reasons one would not expect to find English pipes being imported by The Netherlands. In view of the intense rivalry between English and Dutch pipemakers, the persistent attempts of the English government to prohibit or at least heavily tax the importation of Dutch pipes, the superiority of Dutch pipes compared to English pipes, and the cheapness of Dutch pipes compared to English, one can see no grounds for supposing English pipes would find The Netherlands a profitable market, nor indeed for supposing that they would be permitted to be imported. Certainly no British material was observed by this writer in any of the museum pipe-collections examined in Belguim and The Netherlands in 1969.

There is, however, an intriguing reference in a 1710 decision of the Bristol Pipemakers' Guild on standardizing lengths of pipes (see p.15 above) to "Dutch Pipes" to be thereafter 14 ins long measured from the heel. It is difficult to say, however, what "Dutch" pipes are here: other types of pipes whose lengths were defined included "Jamayca" and "Virginia" pipes, which must certainly refer to pipes destined for the vast trade to these colonies (cf pp655ff below - "Virginia" pipes were presumably traded to all the British American colonies), but other types again were "Long Pipes", at 16 ins the longest type produced; "Pecked(?) Heeles", an appellation which at present means nothing to this writer; and "Gantletts" [sic], which are presumably pipes plagiarizing the name of the famous Wiltshire pipemaking family of Gauntlett (see pp258-9). Thus "Dutch Pipes" could refer to pipes destined for trade to The Netherlands (or conceivably bought in Bristol by Dutchmen for their own oversea trade - there is a 1719 reference to English trading companies being allowed to buy Dutch pipes because they were cheaper than English, provided the pipes were not imported into England (see below)); to pipes imitating Dutch pipes in style; or possibly simply to high-quality pipes, Dutch pipes being famous for their quality (cf p.96 above). Certainly, this writer knows of no Dutch-style pipes produced in Bristol; and indeed to modern eyes, used perhaps to the almost endless variety of C19 pipes (cf 156, 164, 23 above), there is remarkably little difference among bowl shapes in any one area at any time in the C17 and C18 (cf p.166 above). It is possible that stem length was in fact the only critical difference among the various types listed in 1710 - unfortunately, the extreme rarity of whole pipes makes it impossible to try to recognize these styles from finds, and unless a very well preserved waster-dump is found, or an undamaged cargo recovered from a sunken ship, identifying these types is likely to remain impossible.

In conclusion, therefore, it would appear safer to withhold judgement as to whether Bristol, or indeed any English, pipes were exported to The Netherlands until either definitely identifiable specimens have been recorded from excavations or documentary proof is produced.

(3) Africa

In Africa little archaeology has so far been done involving sites containing European material, but vast amounts of European material were shipped to West Africa as part of the slave trade (e.g. Donnan (ed) 1930-35: passim; Ratelband (ed) 1953: passim) and the appearance of such material, including clay pipes, in excavations at Asebu (Nunoo 1957), Ladoku (Ozanne 1964), Bui (York 1965), Ahinkro (York in Calvocoressi (ed) 1965), and Bantama - formerly Abensim - near Elmina (Calvocoressi 1968; Calvorcoressi (ed) 1969), all in Ghana, and from other Ghanian contexts (Calvocoressi MS), indicates it will be found on excavations involving C17 and later occupation. The key terminus post quem for Ozanne's dating of locally-made clay pipes in the Accra area, for example, was the occurrence in a stratified deposit in a midden at Ayaso of fragments of a Wanfried sgrafitto-ware plate datable to ca.1625 (Ozanne 1963).

Until more archaeology of suitable sites is undertaken, however, information on clay pipes shipped to West Africa must be largely confined to documentary sources. Trading to the Guinea coast was carried on by a number of countries, particularly Portugal, The Netherlands, England, and France at various times, and a word of caution must be given against assuming that, for example, the presence of Dutch clay pipes must invariably indicate Dutch influence: in 1719 it was observed (noted in Donnan (ed) 1931: 241-2) that English trading companies had been allowed to go to The Netherlands to buy pipes there for the African trade because they were cheaper than English pipes, though it was forbidden to import Dutch pipes into England. The only excavated site for which there is an adequate description of European pipes found is Asebu, and there the pipes dated from the C17 to C19 and were predominantly Dutch but with some English, though none of the latter could be identified as Bristol (Nunoo 1957: 16-17, pl III bottom, additional photographs from author 23 May 1969, additional identifications Oswald in litt. 1 January 1969).

There is no doubt pipes were used extensively in West African trade. As already noted when discussing the Liverpool pipe industry (4: II), 1,791 gross pipes, or over quarter of a million, were exported from Liverpool for West Africa in 1770 (Donnan (ed) 1931: 536). Not all, however, appear to have been used to trade for slaves, for there are references in 1691 and 1714 to pipes being among "provisions" for slaves and an observer writing in 1735 noted that slaves on board ship were allowed exercise and pipes and tobacco (Donnan (ed) 1930: 372; 1931: 181, 282). Pipes were certainly also used in C19 legitimate trade with West Africa: a manuscript account of New England legitimate trade there at the beginning of the C19 has various references to "Pipes Common short, with large bowles; a few 18 or 20 inches long", "Gentlemens Pipes", "large English & dutch pipes", and "long Dutch or English pipes" being among the goods noted (G.E. Brooks 1970: 324, 326, 329, 334). Pipes were among trade goods particularly favoured by traders for use as "dashes" - presents - as part of the trading and bargaining palavar (Brooks op. cit. 318, 321, 326, 338, 341).

That Bristol traded pipes to West Africa is indicated by several shipping records. Minchinton (1957: 77) notes two boxes of tobacco-pipes in a cargo bound for Africa on the galley Raymond 4 February 1719/20, and

Donnan (1931:326) notes a barrel of 14-1/2 gross pipes - over 2,000 - in a similar cargo dated 30 September 1725 (the 14-1/2 gross cost 1s each and the barrel 2s). Another, undated, reference notes 12 gross tobacco-pipes among the "provisions and supplies" on a Bristol slaver bound for West Africa (Donnan (ed) 1931: 446, repeated in MacInnes 1939: 206). These shipments are certainly not likely to be isolated examples, but it is perhaps not coincidence they occur at a time when both the slave trade and the pipe industry in Bristol were at the height of their prosperity.

Bristol goods may also have reached as far afield as Madagascar (now the Malagasy Republic) and India in the first quarter of the C18, for in 1721 a Bristol informant revealed that Bristol ships allegedly sailing for the Guinea coast were in fact going to Madagascar and trading there with smugglers from India who were able to supply cheaper slaves. As this infringed the East India Company's trade monopoly it was stopped, but presumably it had been going on for some time prior to 1721 (Latimer 1893: 127-8).

Shipping pipes to Africa from Bristol continued long after the end of the slave trade. As already noted in Section VI above, a manuscript note of September 1952 written by the last Thomas George claims that Mr George's great-great-grandfather "helped Mr John Carey, when pressed for time to catch the Ships going to the West coast of Africa". John Carey (or possibly two John Careys - see Appendix IX) is recorded free in 1780 and appears regularly in trade directories from 1791 to 1815. Mr George's remarks are obviously a family tradition, and as discussed in Section VI, while some parts seem definitely inaccurate Carey does appear to have had a prosperous business. His family had been pipemakers from the mid-C18, and with the revival of pipemaking in Bristol from the beginning of the C19 Carey may well have re-established oversea trade of the type which had made the industry prosperous in pre-American Revolution days.

MacInnes (1939: 382-3, 1968 ed) notes that in the years immediately after the American Revolution Bristol began to develop a direct trade with West Africa wholly unconnected with the slave trade, which was in any case abolished in 1807. This trade, MacInnes notes, developed slowly until the 1860s, after which it declined so that by 1890 no ships were clearing Bristol for West Africa or returning to Bristol from there. Mr George's claim therefore fits the economic background of the time; an examination of the port books would no doubt produce confirmation. There is indirect evidence for the revival of the African trade starting only ca.1800 from an advertisement of 1799 among the pages of the Bristol Pipemakers' Guild Book signed by four of the six Bristol pipemakers known to have been in business at this time in which details of various costs of pipes for home, West Indian, American, Irish, and Spanish markets are noted but the African trade receives only the comment "Likewise Tobacco Pipes made exactly to Patterns, for Africa and any other Market", suggesting it was not yet of significance. The four makers placing the advertisement included John Carey, the others being Anna Viner, Joseph Edwards jr, and Samuel Richards jr.

That Bristol continued an African trade in pipes is suggested by a comment made at the time the last Bristol firm, George's, closed in 1921, that until ca.1900 the firm had a major trade with South Africa, trade there taking most of their weekly production of 500-600 gross. They were used, according to the report - which was quoting one of the George family - to barter with the natives and buy ivory and other products (Anonymous 1921a).

There is therefore every reason to expect that Bristol pipes will be recovered from excavations of African, particularly West African, sites of both the C18 and C19. That clay pipes can reach far inland areas, presumably by barter among tribes, is suggested by their reaching the Sudan (Oswald 1960a: 48).

(4) North America and the Caribbean

Unlike Africa, North America has produced archaeologically much European material of the C17 and later centuries, and included has been a great many Bristol-made pipes covering the period from before 1650 to the C19. Random references in published shipping lists suggest shipments were extremely common: McGrath (1955: 272-3, 1968 ed) notes three shipments for New England in March 1679, for example, 200 gross in the Seafare and another of 26 gross in the same ship and 90 gross in the ketch Supply. The previous year the Saphire had taken 140 gross for New England. Twenty-five gross went to Virginia in 1679 in the Samuel and Mary and 16 gross in the Sarah and Elizabeth the same year (McGrath (ed) 1955: 271-2, 1968 ed). More than 100 years later, in 1790, ten boxes of pipes were shipped to Quebec City in the Polly (Minchinton (ed) 1957: 56). Little in an undated context but probably referring to the second half of the C18 notes pipes among commodities sent to Newfoundland in exchange for the products of the fishing fleets and sealers (1954: 163, 1967 ed), and Latimer in a reference discussed in more detail below notes Bristol had been exporting 500 or 600 boxes of pipes annually to the colonies prior to the outbreak of the American Revolution in 1775 (1893: 414). As noted on p.978 above, a Bristol Pipemakers' Guild agreement of 1710 standardizing lengths of various types of pipes referred to "Jamayca" and "Virginia" types, the former having a stem-length of 13 ins measured from the heel and the latter being 8-1/2 ins long, a length which made them the shortest of the six types noted (the longest was 16 ins). Nearly a century later, in 1799, an advertisement among the pages of the Bristol Pipemakers' Guild Book indicates that pipes for the West Indian and American markets were still among the types produced (see p. 679 below).

These references, however, offer only the barest glimpse of the extent to which Bristol pipes were traded in North America. They have been found on European and Indian sites from Newfoundland to Jamaica and as far as Louisiana and Michigan and in an isolated instance, Wyoming.

The earliest Bristol pipes found in North America so far appear to be ones probably attributable to Richard Berryman (fl 1619-52), the earliest-recorded Bristol pipemaker; and to Edward Lewis I (A 1624, fl 1631-40/1, prob. D by 1652) or perhaps to Elizabeth Lewis (fl 1652), who was either Edward's mother or his wife.

Three RB-marked pipes were found at the EB 2 site at East Boothbay, Maine, SE of Bath (Nickel 1966: 14, 15 fig 11). Only one of these is illustrated, and its mark - and in the absence of specific reference to the contrary presumably the marks of the other two - does not include the dagger-and-heart motif normally, but not always, used by Berryman between his initials (e.g. figs a-f, i, k); but the shape of the bowl illustrated indicates the "chinned" West Country form influence which is known on presumably late Berryman bowls (e.g. figs *f*, *i-k*). Strengthening a Bristol connection was the occurence with these pipes of a Philip Edwards bowl (see below). Further, East Boothbay is only across the Damariscotta estuary from Pemaquid (see above) which was originally settled by Bristolians in 1632. The Jamestown RB-marked pipes are less certainly Berryman products, however, for the only information available about them is their letters, neither bowl-shape, details of mark, nor context being available to yield further evidence.[68]

Pipes attributable to Edward Lewis are known from Virginia, one example coming from a rubbish-deposit on the banks of the James River at Newport News (Pearce *in litt.* 24 December 1963 and Pawson 1969: 129 fig 5 no 6, 130) and a number from Jamestown (Cotter 1958: *passim*). Both Edward Lewis's mother and wife were called Elizabeth; his mother was the wife of pipemaker Samuel Lewis, fl 1620s, and the Elizabeth Lewis listed in 1652 among the guild founder-members could be either her or Edward's wife, though the chances are she was the latter. That the rather distinctive style of EL heel-mark attributed to Edward Lewis was used by successors in his family is suggested by its occurrence on a bowl found in Bristol and typologically datable to the 1670s and of a distinctively Bristol shape, for unless Elizabeth Lewis continued working much later than there is evidence for, this bowl must belong to the *Edward Lewis* F 1678/9 fl 1722 who was the grandson of the first Edward and the fourth of five generations of this family all pipemakers. If so, however, it must be one of his earliest products. Cotter dates most of the Jamestown EL-marked bowls to 1650-75 with some to 1675-1700, but the shapes he illustrates as typical of these periods (p.210 pl 92 top row three on right) are of a 1625-55 date and thus cannot belong to the second Edward Lewis.)

James Fox (prob. A 1639/40, fl 1651, F 1654, fl 1668/9, poss. fl 1696) appears to have been the next earliest maker to export to North America, and the distinctive stem mark probably his (see Sub-section (a)(2) above; also Appendix IX) occurs at the following sites (FIG 156):

Maine

Pemaquid, SE of Bath - originally settled by Bristolians in 1632 (Mrs H. Camp *in litt.* 27 July 1966; H. Camp 1968: 11 fig 5 sixth line);

New Jersey

the Salisbury site, nr Swedesboro (Cross 1941: pl 25b no 9);

Virginia

Clay Bank, on the north side of the York River north of Newport News - six examples (I. Noël Hume 1966a: 14, 26 fig 16, 28);

Lightfoot, nr Williamsburg - at least 14 examples (Kelso 1966: fig g,9, 114; 1967: 69 fig 13,5, 70 and n.36, 58);

Jamestown (Cotter 1958: *passim*; Peck 1967: 118, 117 pl II,11).

Fox's pipes may also have been found at the Hunting Creek midden site near Choptank NE of Cambridge, *Maryland*: there the excavator described but unfortunately did not illustrate a stem-mark which he read as XHX between rouletted lines (Flegel 1964: 7) which could very well be Fox's mark of IF with a cross on either side. Curiously, the mark identified with Fox has not been noted in any of the Bristol collections, and the only bowls so far found in North America attached to these marked stems - at Clay Bank and

Lightfoot - though in no case complete, suggest a shape datable on typological grounds to some ten years later than 1668/9, the last definite known date for Fox. An entire bowl with this stem mark from London (see above, home trade), however, does confirm this relatively late date if not one even slightly later - there is a possibility Fox was still alive in 1696.

One of Fox's apprentices, Llewellin Evans (prob. A 1654, F 1661, fl 1684, D by 1688/9) probably expanded his master's trade, for he used a distinctive stem mark rather similar to that of Fox and both stems and bowls attributable to Llewellin Evans have been found on a considerable number of eastern North American sites and in Jamaica. The sites are as follows (FIG 154):

Canada - New Brunswick

Fort Meductic, nr Woodstock, nr the New Brunswick-Maine border (Kain 1903: fig 6, 256; I. Walker MS 1);

Portland Point, Saint John, site of Fort La Tour (Omwake 1957b: 4-8; also Barka 1965: 432, pl 160 fig 79,20);

U.S.A. - Maine

Pemaquid (Mrs H. Camp *in litt.* 27 July 1966; H. Camp 1968: 11 fig 5 second, fourth, and fifth lines);

Massachusetts

the site alleged by the excavator to be the John Alden House at Duxbury north of Plymouth (Robbins 1969: 36);

the Joseph Howland site, Rocky Nook, Kingston, north of Plymouth (M. Brown III 1972: 9);

Rhode Island

find attributed to Burr's Hill cemetery, an Indian burial-ground at Warren, SE of Providence (M. Brown III 1972: 10);

a colonial midden at Portsmouth, SE of Providence - five bowls and five stems attributable to Llewellin Evans from this site (M. Brown III 1972: 5-6, fig 3,1 and 2);

the Jireh Bull site, South Kingston, SW of Providence (M. Brown III 1972: 9);

New York

the Schurz site, Bronx county, New York City (Omwake 1958: 10-11, fig 1b);

New Jersey

the Salisbury site (Cross 1941: pl 25a nos 5 and 8);

Delaware

the Townsend site, nr Lewes (Omwake 1963a: 41-2, pl IIB nos 1 and 2);

Maryland

the Buck site, near Chestertown (Omwake 1967b: 15-16, fig 2; Alexander *in litt.* 17 December 1972 and 23 August 1974);

the Hunting Creek midden site - 13 stems and three bowls attributable to Llewellin Evans from this site (Flegel 1964: 6-9, pl II figs 1a, A, and D);

Sinepuxent Neck, near Ocean City (Omwake 1946: 20);

Virginia

the Hallowes site, Westmoreland county, nr Stratford on the south shore of the Potomac estuary (Buchanan and Heite 1972: 45, 43, fig 4,A and D);

Green Spring Plantation, between Williamsburg and Jamestown (Caywood 1955b: pl XVI bottom left section, extreme left top row);

Jamestown (Cotter 1958: *passim*; J.P. Hudson *in litt.* 6 November 1967; Peck 1967: 118, 117 pl II no 7);

The late H.G. Omwake also noted these pipes had been found in *Pennsylvania* (Omwake 1967b: 15); and elsewhere (1957b: 5) when listing occurrences of LE- and WE-marked pipes noted one or the other or both marks from the Broomall Rock Shelter site at Broomall, Pennsylvania, ca.10 miles west of Philadelphia; but this writer has been unable to locate any published reference to this. However, Omwake had acquired a vast store of knowledge on pipes found in the United States, particularly the eastern United States, and certainly had access to unpublished material. Again talking of LE- and WE-marked pipes, Omwake notes one or other or both from the Fort Raleigh national historic site at Manteo in NE *North Carolina*, but no such find is noted in the excavation report on that site (Harrington 1962) and Harrington (*in litt.* 9 June 1970) has confirmed that no such pipe was found during his excavations there.

West Indies - *Jamaica*

Port Royal (Omwake *in litt.* December 1966; Oswald 1968: 33 and 35 nos 50-3, 105 no 8, 107 no 22, poss. some of 31 and 33 nos 35-9; 1969: 21 and 23 nos 26-31, 67 nos 9 and 12, poss. some of 19 and 21 nos 23-5).[69]

Llewellin Evans's widow *Elizabeth* apparently carried on her dead husband's business, for she is noted as taking an apprentice in 1688/9 and another in 1690.

Bristol pipemakers clearly concentrated on the export market from the time they became an organized trade. Pipes attributable to both *Philip Edwardses* (father F 1649/50, fl 1668/9, D by 1683; son A 1668/9, F 1680/1, fl 1696) - particularly those made by the father - have occurred on a number of New World sites; and so, in lesser numbers, have products of *Flower Hunt* (F 1651, fl 1670, D by 1672) and *John Abbot* (F 1651, fl 1681, prob. D by 1696) and pipes attributable to *Richard Nunney* (F 1651, fl 1696, D by 1713) and *Thomas Monkes* (fl 1656 and 1669/70) all of which reinforce, along with the products attributable to Fox and noted earlier, the impression that Bristol pipemakers had a widespread and major export trade by ca.1660.

Edwardses pipes have been found at the following sites (FIG 161):

Maine

Pemaquid (Mrs H. Camp *in litt.* 27 July 1966; H. Camp 1968: 11 fig 5 fourth line);

East Boothbay, across Damariscotta estuary from Pemaquid (Nickel 1966: 14, 15 fig 13);

Massachusetts

the Saugus Ironworks, on the northern outskirts of Boston - where occupation can be dated to 1646-early 1670s (Fowler 1955: 45, 43 fig 13,9 and 10; also 1965: 16, fig 8,5 and 6);

Rhode Island

Portsmouth (M. Brown III 1972: 3);

New York

Fort Corchaug, west of Riverhead at the NE end of Long Island (Solecki 1950: 32, 31 fig 182);

The Sullivan or Moot site, nr Munnsville south of Oneida in the Mohawk

valley (Bennett and Cole 1973: 23, fig 16,E and N);
Virginia
Jamestown (J.P. Hudson in litt. 6 November 1967)
Newport News (J.N. Pearce in litt. 24 December 1963 and Pawson 1969: 120, 118 fig 1,7b and c);
West Indies - Jamaica
Port Royal (Omwake in litt. December 1966; Oswald 1968: 35 no 54).

Those of Flower Hunt came from Newport News (J.N. Pearce in litt. 24 December 1963 and Pawson 1969: 120, 118 fig 1 no 6 and 6b) and of John Abbot from Jamestown (J.P. Hudson in litt. came from Port Royal (Oswald 1968: 51 no 105; 1969: 37 nos 75 and 76), Green Spring Plantation, Virginia (Caywood 1955b: pl XVI top rt section, second from rt bottom row), Jamestown (Cotter 1958: 41) (FIG 157) and to Thomas Monkes also from Green Spring Plantation (Caywood 1955b: pl XVI top rt section, extreme rt bottom row)[70] (FIG 157).

Pipes attributable to one or both of the William-Evanses (either the William A 1653 to Jane Wall and F 1660 or the William poss. brother of Llewellin above A 1660 initially also to Jane Wall and in 1661 to Robert Tippet I and F 1667; both fl 1682 and at least one fl 1697) have been found at the following sites (FIG 156):

Canada - New Brunswick
Portland Point (Omwake 1957b: 4-8; also Barka 1965: 432, pl 160);
U.S.A. - Maine
Pemaquid (Mrs. H. Camp in litt. 27 July 1966; H. Camp 1968: 11 fig 5 second line);
Massachusetts
the Winslow site, Marshfield, north of Plymouth (M. Brown III 1972: 7);
the Joseph Howland site (M. Brown III 1972: 8);
Rhode Island
Portsmouth - five stems and three bowls (M. Brown III 1972: 6, fig 3,4);
the Jireh Bull site (M. Brown III 1972: 10);
New Jersey
the Goose Island site, near Swedesboro, just south of the Salibury site (Omwake n.d. 4, 11-12);
Maryland
the Buck site (Alexander in litt. 17 December 1972, 23 August 1974, 23 October 1974, and 23 February 1975);
Bennett or Bennett's Point, south of Grasonville on the east side of Chesapeake Bay (Alexander in litt. 23 August 1974);
the Hunting Creek midden site (Flegel 1964: 6, 8 pl II figs 1b and 2);
Sinepuxent Neck (Omwake 1946: 21);
Virginia
the Hallowes site (Buchanan and Heite 1972: 45, 43 fig 4,B and 44 fig 4,K and M);
Jamestown (Cotter 1958: 42, 62; J.P. Hudson in litt. 6 November 1967; Peck 1967: 118, 117 pl II no 16);
Green Spring Plantation (Caywood 1955b: pl XVI top right section, extreme top row);
West Indies - Jamaica
Port Royal (Omwake in litt. December 1966; Oswald 1968: 35 and 37 nos 55-9, 107 nos 18 and 22; 1969: 23 and 25 nos 33-9, 67 no 7, 69 no 14).

By far the most important Bristol pipemakers, however, were the Robert Tippet family. Three generations of Robert, and J(o)ane (fl 1687-96) wife of Robert I, appear to have made pipes for almost a century, though historical evidence about them is surprisingly thin. Robert I married the daughter of a Bristol freeman, claiming his freedom in 1660 on this basis, and died between 1680 and 1687. He exported pipes at least on a small scale: a pipe from the Saugus Ironworks in Massachusetts for example (see below), though lacking its bowl, is attributable to him on the occupation dates of the site - 1646-early 1670s - which would also agree with the general dating implied by the heel-mark used. His wife, still alive in 1696, exported more frequently, and her products, typologically later than those attributable to her husband and datable to the decade or so on either side of 1700, have been found on sites in Canada and the United States. Robert II (B 1660, F 1678, fl 1713, either he or son Robert III fl 1720) built up a major business, including an "export only" pipe style, and his products and presumably those of a shadowy son Robert III (B 1692?, F 1713, either he or father fl 1720) had a vast market and are known from contexts as late as 1760, having been found in Canada in Newfoundland, Nova Scotia, New Brunswick, and Quebec; and in Maine, Massachusetts, New York, Pennsylvania, Michigan, Delaware, Virginia, North Carolina, South Carolina, Florida, Alabama, Mississippi, Tennessee, and (possibly) Louisiana; as well as in Jamaica.

Not surprisingly, Robert Tippett II appears to have been comfortably off: in 1696 he is listed with his family and widowed mother J(o)ane living in Lewin's Mead, which was certainly a reasonably well-to-do area 80 years later when it still had several pipemakers living there (Section VI above). He also had a servant girl, Mary Holden, as well as two apprentices, in 1696 (Ralph and Williams (eds) 1968: 54).[71] (Pipemaker Robert Nunney and his family lived next door to the Robert Tippets in 1696, and pipemaker William Tippet sr (A 1680, F 1689/90, fl 1727/8, either he or son William jr fl 1739), Robert II's younger brother, and his family also lived in Lewin's Mead, further suggestions that pipemaking was a profitable trade by this time). If, as would have been normal practice at the time, Robert Tippet had a workshop in his home, his business must have been considerable, for judging by the many Tippett-marked and unused pipes found dating from the late C17 and to mid C18 it must undoubtedly have been also his kilns which were found in Whitson St when the bus-station was being built and in Rosemary St when that was demolished. This reinforces the general impression that the Tippet family business was big enough to be considered a major enterprise, and certainly not just a humble home industry. Indeed, there is a disquieting possibility (noted above pp617-8) that the widespread occurrence in North America of Robert Tippet pipes in North America in contexts up to 1760 despite the lack so far of any documentary references to the Robert Tippets after 1720 may be in part due to a production latterly of Robert Tippet-marked pipes by some other Bristol maker. If tax paid on real estate by those living in the Lewin's Mead area is a guide to social status, however, the Robert Tippets were probably of middling class - most of those in the area paid ca.2s6d but some paid ca.£1 while the Tippets paid 5s - though much more would would have to be done before general conclusions could be drawn (Ralph *in litt.* 9 September 1970).

The sites at which Robert Tippet pipes have been found are as follows (FIG 158):

Canada - Newfoundland

Placentia, nr the SE corner of the island, SW of St John's (Grange 1971: 535, 536-7, 1963 fig 100,h-i,k);

Nova Scotia

Louisbourg, eastern Cape Breton Island - nine examples (I. Walker 1971c: 73, 76 and 78, 104, 111, figs 18, 19, 45);

Beaubassin, on the Nova Scotia-New Brunswick border (Davoud, now MacLean, 1969b: 10-11, 15, figs 8, 9, 20, 21);

various Acadian sites in Nova Scotia (Calver 1931: 93);

New Brunswick

Fort Beauséjour, on the New Brunswick-Nova Scotia border (MacLean 1971: 22-3, 64 figs 5, 6);

Fort Gaspareaux, nr Port Elgin, extreme eastern New Brunswick (Wylie 1968: 15-16, 21, 20, 30, 31, fig 10);

Quebec

the Restigouche underwater site in the Baie des Chaleurs, on the Quebec-New Brunswick border (at least 15 fragments from 1969 excavations in the National Historic Sites Service's collection);

the St Francis Xavier IV site at Caughnawaga, on the opposite side of the St Lawrence from Montreal (Béchard *in litt.* 15 July 1968);

Fort Senneville, at the west end of Montreal Island (examples seen during visit to Royal Ontario Museum's excavation August 1971);

U.S.A. - Maine

Pemaquid (Mrs H. Camp *in litt.* 27 July 1966; H. Camp 1968: 11 fig 5 second line);

Massachusetts

Saugus Ironworks (Fowler 1955: 45, 44, fig 14.2 and 1965: 16);

the Joseph Howland site - 13 examples (M. Brown III 1972: 8; cf Deetz 1960a: third page);

the Bartlett site, Plymouth - four examples (M. Brown III 1972: 7);

East Harbor Village, Truro, nr north end of Cape Cod (noted in Omwake 1962: 9);

Rhode Island

the Jireh Bull site - five examples (M. Brown III 1972: 9-10);

Connecticut

the Hoyt-Barnun House site, Stamford (Poirier 1974: 13);

New York

A large number of sites both European and Indian (cf Calver 1931: 91 and 93) - Onondaga, Oneida, and Mohawk - in central and upper New York state (E.A. Barber 1880b: 122 and 1882b: 199; Beauchamp 1898: 116; Hagerty 1969 and various personal communications);

Fort Ticonderoga, on Lake Champlain and the route north into Quebec (Gifford 1940: 128-9, 122 fig 14);

Fort William Henry, at southern end of Lake George, between Fort Ticonderoga and Albany (noted in Omwake 1962: 9);

Fort Niagara, extreme western New York state, where Niagara river enters Lake Ontario (noted in Omwake *loc. cit.*);

the Pen site, an Onondaga village SE of Syracuse in central New York state destroyed by Frontenac in 1696 (Hagerty *in litt.* 27 January and 3 February 1969);

Rome, east of Utica (Hanson 1971b: 94, 95 fig 2,d);

Schuyler Flatts site, just north of Albany (McCashion *in litt.* 21 August and 11 September 1971);

Douw Point, Rensselaer, on the opposite side of the Hudson from Albany (McCashion *in litt.* 9 November 1971);

the Seven Mile House site, between Schenectady and Albany (noted in Omwake 1961: 13);

in Montgomery county, west of Schenectady (E.A. Barber 1882c: 3);

the Sleepy Hollow restoration at Tarrytown, north of New York City (*ex info.* Miss P.E. Smith at the spring 1971 conference of the Council for Northeast Historical Archaeology at Bear Mountain, New York state);

Manhattan, New York City (Oswald *in litt.* 21 February 1972);*

the Schurz site, Bronx county, New York City (Omwake 1958: *passim*);*

the Whitestone Bridge site, Bronx county, New York City (Oswald 1959a;*

the Travis site at Travis, west side of Staten Island (Burgher 1940: 84; Omwake 1961: 12, in which latter reference the site is erroneously put on Long Island);

New Jersey

the Wilder Mons Kerk Hof site, nr Old Tappan in the extreme NE corner of the state - at least two dozen examples (T. Demarset, "The Wilder Mons Kerk Hof, a Historic Indian Site in the Upper Hackensack Valley", paper presented at the 1972 spring symposium of the Council for Northeast Historical Archaeology, Bear Mountain, New York state);

Van Duyne House site, Wayne (Lenik *in litt.* 13 December 1974);

Pennsylvania

in Wyoming county, west of Scranton (H. Wright 1881; cf E.A. Barber 1882a: col 4 and 1882b: 199);

in an Indian grave in Chester county, west of Philadelphia (E.A. Barber 1880a: 6 and 1882b: 199);

in a similar grave in Lancaster county, adjacent to the west of Chester county (E.A. Barber 1882b: 199);

Indian settlement of Conoy Town, nr Bainbridge in Lancaster county on the Susquehanna south of Harrisburg (B. Kent 1971: 13);

Michigan

Fort Michilimackinac, Mackinaw City, where Lake Michigan joins Lake Huron (Maxwell and Binford 1961: 109; Omwake 1962: 11, nos F and G in illus.; also Petersen 1963a: 2 and 1963b: 4, illus. no 21);

possibly at Fort St Joseph, nr Niles in the extreme SW corner of the state, near the Michigan-Illinois border (reference in Quimby 1942: 545-6 to pipes "with 'TD' or 'RT' stamped on the bowls...in the collections from the Angola farm [Louisiana] and Fort St. Joseph": the article is a comparison of trade goods in Michigan and Louisiana, but the vagueness of the wording leaves it uncertain whether both TD *and* RT pipes were found in *both* states);

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*Cf reference to Tippet pipes from "Upper New York City" in Calver 1931: 93.

Delaware

Lewes, in the SE of the state (illustrated in Oswald 1959a: 60 fig 2,A);

Maryland

St Marys City, on the north shore of the Potomac estuary nr its junction with Chesapeake Bay (Oswald in litt. 21 February 1972);

Sinepuxent Neck (Omwake 1946: 17);

Virginia

the Hallowes site (Buchanan and Heite 1972: 45, 44 fig 4,L) - a probable Robert Tippet stem fragment;

Clay Bank (I. Noël Hume 1966a: 14, where it is described as being marked I/TIP/PET; I am extremely grateful to Noël Hume and to C.M. Watkins of the Museum of History and Technology, Smithsonian Institution, Washington, for sending me the fragment in question, which I feel fairly certain originally read IR/TIP/PET (see below) with the R deliberately removed in the trimming process);

Williamsburg (noted in I. Noël Hume 1962: 220-1 n.96; Alexander in litt. 11 July 1971);

Tutter's Neck, south of Williamsburg and east of Jamestown (I. Noël Hume 1966b: 54);

Green Spring Plantation (Caywood 1955b: upper rt section, extreme end of second row) - a probable Robert Tippet stem fragment;

Jamestown (Cotter 1958: 70; J.P. Hudson in litt. 6 November 1967);

Newport News (Pearce in litt. 24 December 1963);

North Carolina

Brunswick Town, 16 miles south of Wilmington and on the east bank of the estuary of the Cape Fear river (South in litt. 31 August 1965);

South Carolina

Charles Towne, on the opposte - south - side of the Ashley river from the modern Charleston (seen while attending Eleventh Annual Conference on Historic Site Archaeology, Columbia, South Carolina, October 1970);

Fort Moore, on the South Carolina side of the Savannah river opposite Augusta, Georgia - at least a dozen here (ex info. R. Polhemus, Department of Archaeology and Anthropology, University of South Carolina, Columbia);

Florida

the Higgs site nr Wabasso, ca.50 miles south from Cape Kennedy or Canaveral on the east Florida coast (Higgs 1942: 38; H.G. Smith 1949: 18 and 1951: 9-10);

Santa Rosa Pensacola, nr Fort Pickens on the south side of Pensacola Bay south of Pensacola on the Gulf of Mexico (Omwake 1965d: 47);

Alabama

Indian sites on the Tallapoosa River, in the east-central part of the state (editor's note in Bailey 1936: 49);

the Childersburg site, nr Childersburg ca.30 miles SE of Birmingham (Kurjack 1961: 22);

Mississippi

the Tunica Treasure site, somewhere in the area ca.30 miles south of Natchez (Brain 1970 for general information; mark on the single clay pipe found Brain in litt. 8 April 1971);

Tennessee

the Chota site, approximately half-way between Nashville and Chattanooga (*ex info*. R. Polhemus);

a site in Williamson county on the Big Harpeth River, ca.30 miles south of Nashville (Polhemus *in litt.* 25 January 1971);

Louisiana

possibly at a site on a farm at Angola, West Feliciana parish, on the east bank of the Mississippi north of Baton Rouge (ambiguous reference in Quimby 1942: 545-6 - for the argument see the entry above for possible Robert Tippet pipes from Fort St Joseph, Michigan);

West Indies - Jamaica

Port Royal (Omwake *in litt.* December 1966; Oswald 1968: 71-7 nos 160-79, poss. excluding nos 160, 162, 170; 1969: 49-63 nos 112-25 excluding 121 and poss. 112).

Of this vast extent of Robert Tippet pipes only two certain examples, and a further three probables, are known to this writer which can be attributed to Robert I. One definite example is from the Saugus Ironworks, Boston, Massachusetts. The type of lettering for the RT mark - in this case on the heel - is identical to that on all RT-marked Tippet pipes, and the occupation dates for the Saugus Ironworks are 1646-early 1670s. The placing of the RT on the heel is paralleled on finds from Bristol which again typoligically must be products of the first Robert Tippet. The other definite example is the same type of marked heel, from Pemaquid, Maine (seen by writer on visit there November 1972). The probable Robert Tippet stems from the Hallowes site and Green Spring Plantation, both in Virginia, however, would also be attributable to Robert I. These stem fragments have the letters RT on them between two pairs of rouletted lines with the rest of the space filled by impressed diamonds a la Llewellin Evans and the William Evanses products (see above); this form of marking does appear to be distinctively Bristol and the other pipe material from the sites include pipes made by the Evanses, indicating contexts into which Robert Tippet I would fit. No Tippet pipes from Bristol are known so far to be thus marked, but the William Evans F 1667 did finish his apprenticeship with Robert Tippet I. The pipe noted at Jamestown is probably also a product of the first Robert Tippet, but unfortunately no more detail is given than that it had the letters RT on its heel - its context was a deposit for which artefact dating evidence suggested a long life, from the second half of the C17 well into the C18 and possibly into the second half (Cotter 1958: 78-9).[72]

Products of J(o)ane Tippet are identified by their having I (representing J) or I- preceding the R of the name R. Tippet inside the medallion mould-imparted on the right side of the bowl which is the standard identification, generally along with the letters RT impressed facing the smoker, of second- and third-generation Robert Tippet pipes (Oswald 1959a: 61). The name inside the medallion was set out, and indeed spelled, in more than one way: J(o)ane Tippet pipes appear to have characteristically used the spelling and form TIP/ET, while Robert Tippet pipes seem always to have used a double p and set out the name either TIPP/ET or TIP/PET (for a selection of illustrations see Appendix IX).

There is one certain J(o)ane Tippet pipe from Louisbourg, Nova Scotia, marked IR/TIP/ET (I. Walker 1971c: 76, 78, 79 fig 18 btm centre, 73); another marked I-R/TIP/ET from Beaubassin, New Brunswick (Davoud, now

MacLean, 1969b: 15, 26 fig 20); three from Whitestone Bridge, New York, two of them marked IR/TIP/ET and one I-R/TIP/ET (Oswald 1959a: 60 fig 2,B-D); one from Manhattan marked I-R/TIP/IT [sic] (Oswald *in litt.* 21 February 1972). There is also a pipe from Clay Bank, Virginia, probably originally marked IR/TIP/PET (I. Noël Hume 1966a: 14; see further above). The examples from Louisbourg and Clay Bank had the front[73] of the bowl broken, so that it was impossible to tell what letters, if any, had faced the smoker; the Beaubassin example was sufficiently whole to show that it had no letters facing the smoker; the Manhattan example also had no letters facing the smoker; while of the Whitestone Bridge examples two had PT facing the smoker and one TP - unfortunately it is not stated which pipes had which of these impressed marks. One of the IR/TIP/ET pipes from Whitestone Bridge had a raised corded circle surround instead of the more usual plain raised circle; the Beaubassin example with its first line of I-R also had a raised corded circle surround.[74]

Although the Tippets have by far the widest distribution of Bristol pipes in North America they are by no means the only Bristol makers whose pipes occur there between the closing decades of the C17 and about the middle of the C18. Products of the following makers - listed in chronological order of their freedom - have been archaeologically recovered (FIG 159):

- I. Abbott (presum. James F 1676/7, fl 1715, D by 1721/2) -
    - Port Royal, Jamaica (Oswald 1968: 17 no 9);
- William Taylor (A 1681/2, F 1688/9, fl 1706, D by 1721) -
    - Port Royal, Jamaica (Oswald 1968: 69 nos 158 and 159; 1969: 55 no 126);
- John Hunt (one or both of two brothers with the same name, sons of Flower Hunt, one F 1689 the other A 1685/6 and F 1694, at least one fl 1715, poss. fl 1716/7) -
    - Port Royal, Jamaica (Omwake *in litt.* December 1a66; Oswald 1968: 47 nos 89 and 90);
- Devereaux Jones (one or both of father A 1684, F 1691, fl 1713, D by 1727 or son F 1727, fl 1739, D by 1748) -
    - Port Royal, Jamaica (Oswald 1968: 47 and 49 nos 94-6; 1969: 35 no 67);
- Charles Chick (A 1688, F 1697, fl 1707, D by 1721/2 according to Burgess Rolls but listed in 1722 poll-book) -
    - Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1968: 25 no 29);
- Thomas Owen (one or more of three makers of this name - father A 1688/9, fl 1696, F 1698, D by 1725; son F 1725; or third Thomas A 1716, F 1727 - second and third Thomas both fl 1739) -
    - Beaubassin, Nova Scotia (Davoud, now MacLean, 1969b: 12, 23 fig 12 - the letters on the side of the pipe facing the smoker are described and illustrated as being "TD", but they are "TO");
    - the Pen site, SE of Syracuse, New York state (Hagerty *in litt.* 27 January and 3 February 1969);
    - Jamestown, Virginia (Cotter 1958: 239);
    - Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1969: 53 nos 107 and 108; 1969: 39 and 41 nos 83-5 and poss. 82);

Isaac Evans (fl 1696, F 1698, fl 1700/1) -

Williamsburg, Virginia (Alexander *in litt.* 11 July 1971);

Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1968: 39 and 41 nos 67-8, 70-3, poss. some of 31 and 33 nos 45-9; 1969: 27 and 29 nos 46-9 and 51, poss. some of 19 and 21 nos 23-5);[75]

Henry Edwards (A 1689, F 1699, fl 1727) -

Placentia, Newfoundland (Grange 1971: 536, 1963 fig 100,j);

St Francis Xavier IV site at Caughnawaga, Quebec (Béchard *in litt.* 15 July 1968);

Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1968: 37 and 39 nos 61-5; 1969: 25 and 27 nos 40-5);

Henry Hoar (prob. A 1688, fl 1696, F 1699, fl 1723, D by 1739) -

Williamsburg, Virginia (Alexander *in litt.* 11 July 1971);

John Masey (either father A 1691, F 1700, fl 1726 or son F 1723, one of them fl 1726 and D by 1738) -

Port Royal, Jamaica (Oswald 1968: 51 no 104);

Edward Reed (A 1699, F 1706, fl 1723, poss. fl 1735) -

Louisbourg, Nova Scotia (I. Walker 1971c: 80-1 refers, while discussing a possible Edward Randall jr pipe - see below - to a pipe with ER facing the smoker and a cartouche with an indecipherable name inside it, only what appears to be an O being visible at the end of the middle line: this is probably an Edward Reed pipe);

St Francis Xavier IV site at Caughnawaga, Quebec (Béchard *in litt.* 15 July 1969);

Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1968: 63 nos 138-41; 1969: 4 45 and 47 nos 98-102);[76]

I. Jenkins (prob. either James A 1700, F 1707, fl 1739; or son John F 1739 prob. too late. Joseph F 1768, fl 1784 definitely too late) -

Port Royal, Jamaica (Oswald 1968: 49 no 97; 1969: 35 no 48);

John Wilson (F 1707, fl 1722) -

Port Royal, Jamaica (Omwake *in litt.* December 1966; Oswald 1968: 81 no 192; 1969: 55 no 131)

George Ebbery (F 1721, fl 1781) -

Fort Beauséjour, New Brunswick (MacLean 1971: 26-7, 67 fig 12);

Fort Michilimackinac, Michigan (Omwake 1962: illus. fig J; Petersen 1963a: 5 top illus. and 1963b: 1st pl fig 1);

Williamsburg, Virginia (Alexander *in litt.* 11 July 1971);

Port Royal, Jamaica (Oswald 1968: 31 no 43);

William Nicholas (A 1723, F 1730, fl 1775) -

Fort Beauséjour, New Brunswick (MacLean 1971: 23, 53, 64 fig 7);

Port Royal, Jamaica (Oswald 1969: 55 no 128 and prob. 1968: 89 no 217 which is the same as 1969: 65 no 158);

William Foord (A 1723, F 1733, fl Bristol 1740/1, poss. left Bristol bef. 1748, fl London 1754) -

Pemaquid, Maine (Mrs H. Camp *in litt.* 19 December 1972);

Thomas Grant (A and F dates unknown, fl 1748/9, D by 1751) -

Schuyler Flatts site, Albany, New York state - T/GR/ANT in a cartouche (McCashion *in litt.* 11 September and 4 December 1971);

George Viner (A 1740, F 1747, fl 1757, D by 1775) -

Douw Point, Rensselaer, New York state - G/VIN/ER and G/VY/NER in cartouches (McCashion *in litt.* 11 September and 4 December 1971).

In addition, a stem fragment marked VI/NER/BRIS/TOL in typical Broseley fashion was recovered from Louisbourg, Nova Scotia, in a 1758-68 context (Lindsay *in litt.* 8 November and 6 December 1972). As noted below (p. 679) Anna Viner, George's widow, is also known to have exported to North America, and as this Louisbourg stem bears no first name or initial it could have been a product of either Viner. The closely-dated context unfortunately does not help here, because George Viner is last noted in 1757 but Anna Viner is not recorded until 1775, leaving an 18-year gap sometime during which George must have died. However, the two definite Anna Viner finds can be attributed to within her known dates of working, 1775-1805, so that it is possible the Louisbourg fragment may in fact be a product of George.

There are also two pipes from Port Royal, Jamaica, which can with confidence be attributed to Bristol makers, though in each case the first-name initial is missing, making precise identification of the maker impossible. One is a Bristol heel-less type 9 bowl form with the name LEW/IS inside a circular medallion on the side of the bowl in typical Bristol style (Oswald 1968: 39 no 100), and this can be ascribed to one of several *Lewises* working in Bristol in the late C17 and earlier C18. Possible makers are:
John I - F 1669, fl 1690, D by 1696;
Edward II - F 1678/9, fl 1722;
Francis - F 1691, fl 1722, D or left Bristol by 1736, son of John Lewis I;
Susannah - fl 1696-1707, widow of John Lewis I and mother of Francis.
A bowl of the same shape as that from Port Royal but with the medallion reading E/LEWIS/* (fig *p*) in the Bristol museum collections must be a product of Edward Lewis II.

The other Port Royal bowl, as noted when discussing changes in type 9 bowl form above (home trade), has EDW/ARDS in a rather elaborate cartouche comprising a circle of dots with some sort of floral and fan or shell motif at the foot (Oswald 1968: 37 no 60). Unfortunately, the upper part of the bowl is missing, preventing a definite attribution of bowl shape and possibly removing letters before the name Edwards in the cartouche. The bowl-form may have London type 9 influence, and the relative elaborateness of the cartouche might suggest a later C18 date; a similar bowl with the same name and also sans first-name initial but with foliage and similar decoration on the bowl is in the Bristol collections (seen in Bristol City Museum by this writer November 1973). Assuming a later C18 date for the Port Royal example, a number of Bristol Edwardses can be considered likely makers. They are:
Jonas jr - F 1747, fl Bristol 1754, fl London 1774-84, grandson of the Henry Edwards F 1699 noted above;
John - A 1740, F 1747, brother of Jonas jr;
Joseph sr - F 1747, fl 1792, brother of Jonas jr and John;
Joseph jr - F 1774, fl 1823, son of Joseph sr;
John - F 1784, fl London 1784-1812, not known to be related to the above three or the other Bristol Edwardses (Philip sr and descendants).

Another Bristol maker whose products reached North America is the unknown person with the initials IS who used as a mark his initials on the stem in a row of impressed diamonds bordered by double dashed or sometimes (possibly when the denticulated blade slipped) scored, a la Llewellin Evans and the William Evanses. As noted in the section on home trade above there are at least five makers with these initials covering the period ca.1690-1720 suggested by a bowl on an example in Bristol museum from that city, but the most likely makers are John Sinderling (A 1653, F 1668, fl /1696, D by 1699 - prob. in the autumn of 1699) and John Squibb (F 1704/5, fl 1734). Stems with this form of mark occur at Pemaquid, Maine (Mrs H. Camp in litt. 27 July 1966; H. Camp 1968: 11 fig 5 sixth line), at Portsmouth, Rhode Island (M. Brown III 1972: 6, fig 3,9) and at the Hunting Creek midden site, Maryland (Flegel 1964: 7, pl. II fig B); the contexts of the latter two are third quarter of the C17 in date with Philip Edwards, Llewellin Evans, and William Evans material but none of the Tippet pipes typical of the late C17 which suggests the maker of the IS-marked fragment is more likely to have been Sinderling than Squibb.

Stems with this same decoration of impressed diamonds and pairs of dashed lines but with the initials IP occur at the Salisbury site, New Jersey (Cross 1941: pl 25b,10), and Port Royal, Jamaica (Oswald 1968: 105 no 107); but as noted above when discussing this form of decoration in the section on home trade no examples have been recovered in Bristol. As noted above, three Bristol makers with these initials could fit the ca.1650-80 period suggested by the definitely Bristol pipe material at the Salisbury site - Jacob Prosser (A 1655 F 1662/3 fl 1680), John Prosser (F 1673), and John Poyte II (F 1680 fl 1715) - but until IP-marked stems are recovered in Bristol an attribution to any of these makers cannot be firmly made.

It is possible too that products of Charles Hickes (A 1714 F 1721/2 fl 1740 D by 1747?) reached North America. Unfortunately a lack of Bristol finds attributable to this maker prevents certain identification, but a Bristol type 9 bowl with the letters CH impressed facing the smoker in typical Bristol fashion is at Gloucester City Museum and Art Gallery and if it is indeed a Bristol product Charles Hickes appears to be the only possible maker. Similarly-marked bowls come from Pemaquid, Maine, one at least in a first-half-of-the-C18 context (Mrs H. Camp in litt. 27 July 1966 and 16 March 1972; H. Camp 1968: fig 5 second line) and from Port Royal, Jamaica (Oswald 1968: 43 no 80, repeated in 1969: 31 no 59).

One Bristol maker whose products probably did reach North America is Edward Battle (A 1651, F 1660, fl 1669), the elder Philip Edwards's first apprentice, for pipes marked EB have been found widely in the eastern United States (FIG 160). Unfortunately, however, it is difficult to identify definite Battle products in the Bristol collections (see preceding section). The EB-marked pipe of a distinctly Bristol bowl form at Abergavenny and District Museum (preceding section) seems the most probable example of a Battle pipe, but no EB-marked pipes of this shape are known to this writer from North America. To confuse matters, the letters EB were being used as a mark by the Dutch by 1664 (Helbers and Goedewaagen (1942: 16, 47) note the first recorded use of these letters at Gouda in 1672, but as is noted below, a pipe with this mark was recovered from the wreck of a Dutch ship which sank in 1664) and C17 Dutch pipes occur widely in parts of eastern North

America, the Dutch themselves trading with their New Netherland colonies in what are now New York state, New Jersey, and Delaware from the 1610s until 1664 and again in 1673-74 before the Treaty of Westminster of the latter year ended the Third Dutch War and finally gave these colonies to Britian, the Swedes using them in New Sweden - Delaware and southern New Jersey - 1638-55 (see p.306 above) between its periods of Dutch occupation, and the French using them in New France (e.g. examples from place Royale, Quebec City (Lafrenière and Gagnon 1971: 90 photo 62, top left and btm rt bowls)).

The difficulty in deciding whether various EB-marked pipes in North America are Dutch or English is heightened by their occurrence in areas known to have received Dutch trade - New York, Connecticut, and Pennsylvania, for example - and by a frustrating tendency for them to occur on sites with both Dutch and Bristol pipe material.

For example, at the Townsend site near Lewes, Delaware, a fragment was found with the letters EB raised on the heel in company with three fragments bearing the stem-marking of Llewellin Evans (see above) and a bowl bearing the Gouda mark of the Milkmaid on its heel (Omwake 1963a: 41-2, pl 11B, 1-4). At the Sullivan or Moot site near Munnsville, south of Oneida in the Mohawk valley, northern New York state, EB-marked bowls, in this case certainly Dutch-looking, occurred along with fleur-de-lis-marked stems which are certainly Dutch (see p.347 above) and a possible Sir Walter Ralegh bowl, which would also certainly be Dutch (see 1: II(h)); but the finds also included a Philip Edwards-marked bowl (see above) (Bennett and Cole 1973: figs 16 and 23). Again, at Fort Shantok, an Indian village on the Thames south of Norwich in SE Connecticut, a pipe with a raised EB on the heel occurred with other material which included West Country "chinned" bowls (of the same family as those favoured by the John and Flower Hunt - see preceding section and entries in Appendix IX) and some type 9 examples which could also have been Bristol made, but which also include a fleur-de-lis-marked stem (Salwen 1966: 27-35, figs 10-11). At the closely-related Indian site of Fort Corchaug on Long Island, New York, just across Long Island Sound from Fort Shantok, an EB-marked pipe occurred in association with on the one hand pipes made by one of the Philip Edwardses (see above) and at least one unmarked example of the West Country "chinned" bowl-shape referred to when discussing the Fort Shantok material, and on the other with the same Dutch fleur-de-lis stem fragments as at Fort Shantok (Solecki 1950: 32, 31 fig 18,n).[77] (EB pipes are also known from Fort Massapeague, near Massapeaque on the south shore of Long Island, west of Greater New York (Omwake n.d. 4, 21-4).)

At the colonial midden excavated at Portsmouth, Rhode Island, no fewer than ten EB-marked fragments involving three variants of the mark and all but one on the base of heelless bowl fragments were found (M. Brown III 1972: 3-4, fig 2,1 and 2). The other Portsmouth material included five Llewellin Evans-marked stems and like number of bowls, three William Evans-marked bowls and five stems, and two Philip Edwards-marked fragments (see above), as well as considerable quantity of unmarked "chinned" bowls of the Bristol-West Country style; but again there is at least one Dutch bowl, which has the Goblet mark found along with other Dutch material and an EB-marked fragment at the Oscar Leibhart site in Pennsylvania (see below). Unfortunately all ten EB-marked fragments from Portsmouth are too fragmentary for their bowl shape to be seen.

At the *Salisbury site near Swedesboro, New Jersey*, a pipe with a raised EB on the heel occurred along with James Fox stems and Llewellin Evans bowls and stems (see above), and also with fleur-de-lis marked stems and roulette-ornamented Dutch stems (Cross 1941: pls 25a and 25b; for a discussion of roulette-ornamented Dutch stems see I. Walker 1971c: 82-5). At *Jamestown, Virginia*, where as noted above a number of Bristol makers can be identified - James Fox, Llewellin Evans, the William Evanses, the Philip Edwardses, John Abbot, Robert Tippet I - EB pipes have occurred (J.P. Hudson *in litt.* 6 November 1967; also South 1971: 42 citing I. Noël Hume *in litt.*), but fleur-de-lis and other decorated stems probably Dutch also occurred at Jamestown (Cotter 1958: *passim*); further, Hudson also noted the crowned EB mark and this is certainly Dutch (Helbers and Goedewaagen 1942: 245).

At *Port Royal, Jamaica*, EB pipes occurred (Omwake *in litt.* December 1966; Oswald 1968: 19 no 15; 1969: 15 no 6), but though there was a vast variety of Bristol material (see above) there was also an appreciable amount of Dutch, including the ubiquitous fleur-de-lis stems (Oswald 1968: *passim*; 1969: *passim*); indeed, if the drawings of the two EB pipes illustrated in Oswald 1968 and 1969 are reasonably accurate, they appear more likely to be Dutch than English.

EB pipes have occurred particulary frequently on C17 Amerindian sites in central and western New York state (E.A. Barber 1882b: 199 where they are described, presumably wrongly, as being of terracotta; 1882c: 3; Beauchamp 1898: 116; Wray and Schoff 1953: 57, 58, 59; Tuck 1971: 184; Wray 1973: 13 and fig 15-2 and -3; Hagerty various personal communications; Omwake n.d.: 5, 17-20);[78] but until Wray's recent publication accompanied with coloured slides (Wray *loc. cit.*) there has been a lack of description or illustration in the published sources. From unpublished drawings and accounts, and in some cases personal examination of specimens, it is apparent that at least some are Dutch, which in view of Dutch trade in this area through their posts at Nieuw Amsterdam (New York) and Fort Orange (Albany) is in no way surprising. In the case of sites noted by Hagerty, fleur-de-lis decorated stem-fragments were frequently associated with these EB bowls. Wray (*loc. cit.*) illustrates two types of EB pipe bowl-forms, one of which (fig 15-3) is certainly Dutch, though probably rather later than the ca.1660-75 date attributed to it, while the other (fig 15-2) is somewhat earlier - Wray dates it to ca.1645-60 - and has no real distinguishing features for identification in its shape, though it is most probably also Dutch.

Excavations at present in progress on the site of *Fort Orange* have turned up fleur-de-lis marked stems and two types of EB-marked bowls, one at least of which - a distinctive parallel- or nearly-parallel sided bowl, rather larger than the average Dutch bowl (FIG 118), which has been discussed earlier (pp 269-70,624 above) as a possible origin for alleged Dutch influence on certain English bowl-forms - is undoubtedly Dutch (McCashion *in litt.* 21 August and 11 September 1971). Certainly, pipes of a more conventionally Dutch bowl-shape have come with an EB heelmark, sometimes crowned, from C18 contexts at *Louisbourg, Nova Scotia*, (Hanson 1968: 20, 59 fig 20,I; Hanson and Shott 1968: 40, 127 fig 32,I).

At the *Oscar Leibhart site, on the west bank of the Susquehanna river in SE Pennsylvania, east of York*, a pipe fragment with the letters EB raised from the heel was found with a number of other pipe fragments, all identifiable examples (with the exception of an C18 stray) being Dutch (Omwake 1959). Again, as with the central New York sites referred to above, the Oscar Leibhart site falls chronologically and geographically within the sphere of Dutch trade.

EB pipes were found during the excavations at *Charles Towne, South Carolina* (South 1971: 42), and for once they do not appear to have been associated with fleur-de-lis or other Dutch material. Charles Towne, the precursor of the modern Charleston, was founded by the English in 1670, but by the end of the decade the settlers had moved across the Ashley river to the site of the modern city. It seems reasonable, therefore, to suggest these EB pipes would fit chronologically and by cultural affiliation as English. Oswald (1960a: 27) notes only one other English maker this early with these initials, Edward Biggs who was working at Henley-in-Arden, a Warwickshire village, and whose products are unlikely in the extreme to have gone more than a few miles from where they were made. As noted above (p.643) Bristol had a flourishing trade with the Carolinas from the 1660s, and the Robert Tippet pipe from the site (see above), while dating to a later period than the settlement, and the Robert Tippet pipes from Fort Moore (see above) no doubt represent this trade. A number of the EB pipes from Charles Towne were found in association with Indian material, and as this latter must have preceded the English settlement the pipes, if the association is correct, could date to before 1670, but they could still be the result of the Bristol trade with the Carolinas noted above.

The writer examined some of these fragments while attending the Eleventh Annual Conference on Historic Site Archaeology at Columbia, South Carolina, in October 1970, but was unable to say definitely whether they were English or Dutch, though typologically they undoubtedly belong to the later C17. They certainly did not belong to any of the distinctive Bristol or West Country shapes of this period, for example that used by a number of Bristol makers ca.1640-70 - Edward Lewis, Thomas Monkes, Richard Nunney (at times), the Philip Edwardses, Robert Tippet I (at times) - nor to the "West Country chinned" style used for example by John and Flower Hunt in the 1650s and 1660s, nor to the various shapes used at times by Llewellin Evans and one or both of the William Evanses in the 1670s-90s (for details of these shapes see entries in Appendix IX). None of this, of course, is conclusive and it does seem reasonable to assume these Charles Towne examples are most likely to be the elusive products of Edward Battle.

Certainly the two examples from Port Royal noted above appear more likely to be Dutch than English; in most of the other cases even when enough of the bowl survives, however, it is not possible to be certain of nationality. (Essentially, the problem is that not enough EB-marked pipes have been recovered in Bristol to enable a corpus of convincingly-attributable Edward Battle pipes to be compiled and that there is a lack of published illustrations and descriptions of indubitably Dutch EB-marked pipes either from The Netherlands or from Dutch colonial sites. However, with the amount of urban archaeology now being done in Bristol the chances of finding Battle pipes are greatly improved, and if the Fort Orange pipe material is eventually published the lack of Dutch EB pipes will be remedied. One certainly Dutch EB pipe is an example recovered from the wreck of the Kennermerland, a Dutch East Indiaman wrecked off Shetland in 1664 (Price and Muckelroy 1974: 265-6, 265 fig 7; for background see Forster and Higgs 1973), but the drawing is not of the best and though the pipe is virtually entire - the stem is a good eight ins long - the vital topmost part of the bowl is missing. This find is particularly interesting because the hitherto earliest-known date for Dutch EB pipes, as noted above, was 1672. The EB heel-mark (no bowl-shapes shown) from the Mullion Cove wreck off Cornwall noted when discussing English finds of EB-marked pipes (p.606 above) is probably Dutch, to judge from two possible identities of the ship, though had the ship called at Bristol prior to foundering the pipes could obviously be Edward Battle products.)

Other Bristol makers whose products may have reached North America are the Edward Randalls (father F 1668, fl 1687, D by 1689 and son A 1689, F 1699), though it is difficult to separate pipes likely to be of their manufacture from those likely to have been made by Edward Reed already noted above, A 1699 F 1706 fl 1723 poss. fl 1735, and therefore contemporary with the younger Randall. Definite Reed products have E/REED in a cartouche on the right side of the bowl in the typical Bristol fashion of the time; in addition they sometimes have the letters ER impressed on the bowl facing the smoker (see Oswald 1968: 63 nos 138-41; 1969: 45 and 47 nos 98-102).

The problem is to decide whether bowls marked only with the ER facing the smoker, or with that and the same letters moulded in a cartouche on the right side of the bowl, or with only that cartouche, are more likely to have been products of Reed or one of the Randalls. This problem is also discussed in the section above on home trade: a bowl from Port Royal, Jamaica (Oswald 1968: 69 no 126), with ER facing the smoker and the same letters in the cartouche could typologically be dated as early as the 1680s and therefore attributed to Randall sr rather than to Reed; but a bowl of the same shape but with a spur instead of the heel also from Port Royal cannot be much later and it is indubitably a Reed product as it has that maker's name in its cartouche (fig b). The letters ER facing the smoker also occur on another pipe typologically datable to ca.1680 but of a different shape and with no cartouche from Portsmouth, Rhode Island. The bowl is probably the same shape as that apparently used by James Fox of Bristol noted above (M. Brown III 1972: 8; the bowl shape is illustrated in fig 3,7). That pipes with ER on the bowl facing the smoker are Bristol made, whether by one of the Randalls or by Reed seems certain because these letters also occur in that position on pipes which have the cartouche of Isaac Evans and Henry Edwards, two Bristol makers of this period (see above), the former fl 1696 F 1698 fl 1700/1 and the latter A 1689 F 1699 fl 1727. These and other combined marks are discussed below.

An additional problem is the possibility (Oswald 1960a: 48; Oswald and Atkinson 1969: 186, 187 fig 5,23-5) that the Edward Randall noted taking an apprentice in London in 1719 is Edward Randall jr of Bristol; however, this problem has been discussed at length above when dealing with home trade and the conclusion is that there is no definite evidence to suggest the two Randalls are the same person.

Excluding ER-marked pipes also bearing the cartouche of Edward Reed, the following have been noted on North American sites (FIG 161):

Ferryland, south St John's near the SE corner of Newfoundland (Harper 1960: 111) - described as being "stamped with a crown an 'ER' of 18th century British army issue"; probably a description of a London-style ER mark, for a crown above each initial was very common on London pipes from ca.1680 into the second half of the C18 (Atkinson and Oswald 1969: 185, 204; Atkinson 1965a: 254, 253 fig 6, 255 fig 7; Walker 1971c: 65 and passim. What the reference to British army issue refers to is unclear; presumably the crown was assumed to denote government issue, an interpretation certainly impossible whatever precisely the crowns did mean (cf Atkinson and Oswald op. cit. 204). Probably not a Bristol Randall product;
Louisbourg, Nova Scotia (I. Walker 1971c: 76, 80-1, 82 fig 21) - a fragment with enough of the bowl surviving to show ER facing the smoker but not enough to show whether there was a cartouche on side of bowl. In this case (the archaeological context was datable to ca.1716-1749 or 1750) the letters were of larger size than those used by the Tippets when marking their pipes RT; a bowl fragment from Louisbourg with the letters ER almost identical to those used by the Tippets and a cartouche indecipherable except for the last letter in the middle line which appears to be an O is probably an Edward Reed product (see Edward Reed above);
the William Bradford site, Plymouth, Massachusetts (M. Brown III 1972: 9) - the letters ER moulded on the side of a type 9c bowl;
an Indian cemetery at Kutztown, Pennsylvania, in the SE of the state west of Allentown (Pearce in litt. 24 December 1963; Witthoft in litt. 2 September 1964) - two beautiful examples of the Bristol export-type pipe each with ER facing the smoker and no other mark. Found in a child's burial with inter alia a silver spoon bearing Philadelphia crest and hallmarks datable to 1720-25; Witthoft feels the burial in question dates to the 1720s;
Jamestown, Virginia (J.P. Hudson in litt. 6 November 1967) - described as being on C17 pipes, Jamestown being a mostly C17 site, but no further details;
Berkeley county, north of Charleston, South Carolina, in collections of the Department of Archaeology and Anthropology, University of South Carolina, Columbia (seen by writer on card index while attending Eleventh Annual Conference on Historic Site Archaeology there, October 1970) - enough of a bowl fragment to show ER facing smoker; surface collection;
the Higgs site nr Wabasso, ca.50 miles south from Cape Kennedy or Canaveral on the east Florida coast (Higgs 1942: 38; H.G. Smith 1949: 18 and 1951: 9-10) - Higgs refers to "Many [pipes] which bear the trade mark 'R. Tippet' in cartouche or lettering 'R.T.' or 'E.R.'"; presumably early C18 ER-marked pipes similar to the Kutztown examples noted above
Port Royal, Jamaica (Omwake in litt. December 1966; Oswald 1968: 21 no 21, 59 and 61 nos 124-34 - no 131 has ER facing the smoker and T in a cartouche on the right side of bowl; no 21 has ER facing the smoker and IB in a cartouche on the side; 1969: 43 nos 92-5 - no 95 has (apparently) ER facing the smoker and ER in cartouche on right side of bowl)

There is also what appears to be a London type 9 bowl from excavations at the Minute Man National Historical Park at Concord, Massachusetts, which has the letters ER or possibly EP or EB raised from a depressed surround on the bowl facing the smoker (Mrs C.T. Snow in litt. 6 June 1967). If indeed ER, the nearest parallels would be two of the London examples attributed to the Edward Randall there (Atkinson and Oswald 1969: 187 fig 5,24-5) though it must be said the resemblance is not close in detail. There appear to be no initials on the sides of the heel.

Of particular interest are pipes with various combinations of maker's marks and/or names, for these suggest business partnerships and emphasize what a major and organized industry pipemaking must have been in Bristol in the early C18. The combined marks recorded so far are:

Robert Tippet II and Isaac Evans,
Robert Tippet II and Henry Hoar (the latter had been Robert Tippet II's apprentice).
Robert Tippet II or III and IS (later maker unidentified; a number of Bristol makers with these latter initials at this time are known),
Henry Edwards and ER,
Isaac Evans and ER,
ER and T (see above),
ER and IB (see above),
ER and FR (see above),
FR and IR (no definite identification for either of these two marks).

In North America finds of pipes with these double marks appears so far to be confined to Port Royal, with the single exception of a Robert Tippet/Isaac Evans pipe from Louisbourg (I. Walker 1971c: 79 fig 18 top, 76, 78) not recognised as such when that paper was written. The apparent restriction of such double-marked pipes may be because, of major sites covering the earlier C18, such as Williamsburg and Louisbourg, little or nothing of the pipe material has been published whereas Port Royal material has been with a wealth of drawings, though unfortunately drawings less accurate than should have been the case with such an opportunity available; it may, however, also be because the vast majority of pipes from Port Royal can be certainly or probably identified as Bristol made (cf Atkinson and Oswald 1969: 205; Oswald 1970b: 231) and thus represent a good cross-section of Bristol export products. In Bristol itself two of these combined marks are known, those of Robert Tippet II and Isaac Evans and of Robert Tippet II and Henry Hoar, both from the kiln site in Rosemary St which appears to have been one of the Robert Tippet factories.

As already noted, the apprentice and freedom roll entries, supported by evidence from the poll-books, indicate a sharp reduction in size of the Bristol pipemaking industry ca.1740. The above evidence on oversea trade supports this finding, for from a start before 1650 - the products of Richard Berryman and Edward Lewis I - the number of makers exporting and the geographical extent of their trade rapidly expands from the 1650s, with James Fox, the Philip Edwardses, Llewellin Evans, and the William Evanses the major suppliers, until the end of the century, when the Robert Tippets are establishing a market from Newfoundland to Jamaica and about a dozen other Bristol makers are participating in what is clearly a major Bristol export trade. However, of all those identified as exporting pipes only three - George Ebbery, William Nicholas, and George Viner - definitely took their freedom later than the first decade of the C18: in a few cases where it is not certain whether the products belong to a father or a son of the same name, or to more than one maker with the same name, there may be instances of products from one or two other makers of a later period, but in only one certain and a possible second case - Viner and possibly Thomas Grant - can makers be found who took their freedom later than the 1730s, and the overwhelming impression is that those who were exporting at the zenith of the Bristol clay pipe industry were those working in the decades immediately following 1700.

The archaeological contexts in which these pipes were found unfortunately do not, as a rule, add precision to the dating of the pipes. Rather, it is the opposite, that pipes of known or probable date give more precise dating for the site. The archaeologist thus has to always beware of going round in circles when considering dating evidence.

Occasionally, as with the Thomas Owen pipes from the Pen site near Syracuse, New York, an extremely interesting situation will arise. The Indian village known as the Pen site is supposed to be that destroyed by the Governor of New France, Frontenac, in 1696, and the undisturbed burial ground associated with the village to be that reflecting the destruction. Two TO-marked pipes, attributable to at least one of the Bristol Thomas Owens on the grounds of a number of identically-marked pipes having been found in Bristol, came from the burials, but Thomas Owen I, the earliest of the three makers of that name, did not take his freedom until 1698. However, he is referred to as a pipemaker 26 August 1696 when he obtained a licence to marry Mary Bull, and as he was apprenticed for seven years in February 1688/9 his apprenticeship should have terminated in February 1695/6, and if the rules about taking one's freedom before practicing a trade were slack (as it is known they were - see Section IV above) then Thomas Owen I could indeed have been making and exporting pipes from early 1696. If, therefore, the site is indeed correctly identified and the burials associated with the destruction of 1696 then archaeological evidence from New York state can be used to reinforce a hitherto rather dubious historical point in Bristol. Less dramatically, if the burials do have a date of 1696 then the presence of an RT-marked pipe with them reinforces the evidence from finds of J(o)ane Tippet pipes that the Robert Tippet family were exporting to North America before 1700.

Other sites which are useful are those with a short life well dated historically, for example Fort Gaspareaux, New Brunswick, occupied 1750-56 (see below) or the St Francis Xavier IV site at Caughnawaga near Montreal, Quebec province, occupied 1696-1719, provided such sites are reasonably free from later occupation or intrusion and have been adequately excavated. In the case of the St Francis Xavier IV site no excavation report has ever appeared, but the occupation dates agree with the Robert Tippet material found and particularly with the Edward Reed (A 1699, F 1706, fl 1723 and poss. 1735) bowl found there.

At Louisbourg, where the writer was able to study in detail pipes from certain areas where historical, archaeological, and artefact evidence all suggested well-dated contexts, one area yielded deposits one above the other datable to ca.1716 to 1749 or 1750, 1749 or 1750 to 1755, and 1755 to 1760; while another area had a deposit datable to 1720 to ca.1732 (I. Walker 1971c: passim). In the former area five of the six Robert Tippet pipes - including a J(o)ane Tippet example - came from the ca.1716 to 1749 or 1750 context, the single exception coming from the 1749 or 1750 to 1755 deposit. (The 1720 to ca.1732 deposit yielded three Robert Tippet pipes.) This might be taken as further proof that Bristol pipe exports were declining after the mid-C18, particularly as the later contexts at Louisbourg have a more predominantly English pipe content; however, the evidence is not so simple. The Onondaga and Oneida sites in New York state on which Robert Tippet pipes are common are dated from before 1700 to ca.1750 but the writer's excavations at the closely-dated site of Fort Gaspereaux, New Brunswick, 1750-56, turned up three Robert Tippet pipes while five were found at Fort Beauséjour, New Brunswick, founded in 1751 (four from 1751-55 French contexts) and the underwater work at Restigouche, Quebec, has so far yielded at least 15 from a wreck known to have been sunk in 1760; so it is clear that Robert Tippet pipes were still being exported as late as 1760, whatever the reason for the lack of documentary evidence on their makers after 1720 may be (for a discussion of the possibility that latterly Robert Tippet-marked pipes may have been produced by some other Bristol maker after the Robert Tippet family had either died out or stopped pipemaking see pp617-8 above).

All this agrees well enough with other pieces of documentary evidence. As noted on more than one occasion elsewhere, the pipemaker-turned-poet John Frederick Bryant jr (B London 1753, fl ca.1774 London, F Bristol 1780, D 1791) recalled that his father John Frederick Bryant sr (F 1747, fl 1750s London, returned to Bristol 1760, fl 1775 Bristol D ca.1777) inherited the family business in the early 1760s which was prosperous enough to employ ten journeypeople and keep himself, his wife, and his nine children in relative comfort before the loss of the oversea trade after the Stamp Act troubles of 1765-66 (cf MacInnes 1939: 266-74). Talking of his early days, the poet remembered how his leanings towards writing, drawing, and music could be indulged in at that time and that his father was a good enough violinist to be employed at the Assembly Room at times (he also played the trumpet) and that Bath and Bristol musicians sometimes held their rehearsals in their house.

However, the "confusion occasioned by the American stamp-act...put a great stop to trade to that country, and begun [sic] the ruin of his affairs"; as trade continued to decrease Bryant sr had to let his journeypeople go and continue his work as best as possible with his wife and the four of his children old enough to assist in the work (his post as city trumpeter at the city assizes and later £10 a year as Exchange Keeper, a post given him by the Corporation, enabled him to continue, though with difficulty) (Bryant 1787: vii-viii). Certainly Bryant sr had had an export trade in pipes, for his son records that after about a year's schooling he was "employed in packing up such of my father's goods as were to be sent abroad", though it was a job which apparently gave him considerable leisure from time to time - this would have been ca.1761, when Bryant jr would have been about eight years old (Bryant 1787: iii-iv).

As noted in Section VI above, Sketchley's Bristol directory for 1775, the year the Revolution started, lists 11 pipemakers (including a John Bryant at 61 Lewin's Mead, who is John Frederick Bryant sr, four of them living in then-fashionable Lewin's Mead. If, like Bryant, the others had also been employing up to ten journeypeople prior to the Stamp Act troubles, there could have been some 100 pipemaking employees in the city in the early 1760s. In fact, the 1754 polls note 48 pipemakers in the city (see Section

V above), to which one may add freemen who did not vote (though in this particular election probably most freemen did - see Section IV), possibly a few unfree journeymen, and perhaps some women-workers - Bryant jr referred to his father having "journeypeople", suggesting there may have been both journeymen and journeywomen. The total may have been ca.65-70. Assuming all businesses were as adversely hit as was Bryant's an appreciable number of people must have been put out of work and a large number of families affected. Certainly, when the American colonies retaliated against the Stamp Act with their embargo on British goods the metal industries of Birmingham and the Black Country were severely hit, it being claimed at the time that many merchants had most of their capital "locked up" in North America and that more than half the iron goods and three-quarters of the nails made went to the American trade, so that from "three to fifteen thousand manufacturers [workers] in these branches of trade will be entirely out of work in ten or fourteen days" (Chapman, Chambers, and Sharpe 1970: 135-6, quotation on p.135). That the American Revolution in 1775 put the finishing touches to the collapse of the Bristol pipe-industry is suggested by the drop in businesses listed in 1783 to 2 from the 11 recorded in 1775. While this total of two is probably an understatement (see Section VI above), other directory entries for the 1780s and 1790s suggest only five to seven firms, no doubt with much-reduced staff or none at all beyond the owner's family, struggled through this period. In the early 1780s Bryant jr went to London and set up in the stationery, book- and print-selling business partly because the pipe trade was still "greatly on the decline" (Bryant 1787: xxxiii).

At a national level there is evidence the English export of pipes to the American colonies largely or wholly ceased with the war, for at Williamsburg Dutch pipes occur in Revolutionary War contexts (I. Noël Hume in paper "James Geddy and Sons, Colonial Craftsmen: An Exercise in Historical Archaeology" given at the Spring 1968 Conference of the Society for Post-Medieval Archaeology, Cardiff), the only time such pipes do occur and no doubt obtained by the colonists through sympathetic French sources; while even more significantly, excavations at Fort Montgomery, New York state, on the Hudson near West Point and built in 1776 as one of the American Colonists' major defences on the strategic route up the Hudson to Canada, have produced a large number of Dutch clay pipes (Miss D. Moore, "Artifacts from Fort Montgomery", paper presented to the 1974 spring symposium of the Council for Northeast Historical Archaeology, Bear Mountain, New York state).

That Bristol trade in pipes to the American colonies survived the Stamp Act troubles and did continue until the Revolution, and that the Revolutionary War did ruin it for the time being is indicated by the port-books studied by Jackson and Price, which show 1,194 boxes of pipes shipped to the American colonies in 1773 - half the total exported that year - but only 254 boxes in 1774 and none for the years 1775-79[79] (Price *in litt.* 18 January 1974); and Latimer presents similar evidence, though apparently from a different source, noting that "the tobacco-pipe makers of Bristol - a numerous body - each sent 500 or 600 boxes of pipes yearly to the colonies, but the exports ceased after 1774" (1893: 414).[80] The George Ebbery pipe noted above from Fort Beauséjour, New Brunswick, where it occurred in a 1775-1833 context; the Anna Viner pipes noted below from Fort Lennox in Quebec province and Carleton Island now in northern New York state; the IE-marked pipe from Fort Coteau-du-Lac in Quebec province also noted below which is attributable to one of the Joseph Edwardses working in Bristol in the later C18 and earlier C19, the fort being founded in 1779; and probably the George Ebbery pipe noted above from an unknown context at Fort Michilimackinac, now in northern Michigan, and the William Nicholas pipe from an unknown context at Fort Beauséjour also noted above are the archaeological evidence that the shipment of Bristol pipes to Quebec City noted in 1790 (see below) is not an isolated one at this time. However, the port-books for the later C18 and early C19, according to Jackson and Price, do give only occasional references to shipments to Canada; Newfoundland, Halifax, Quebec City, and Montreal being among the places listed. (Canada, of course, remained loyal to Britain during the American Revolution, and Fort Michilimackinac remained British until 1781 and Carleton Island until 1812.)

The conclusion to be drawn from the available evidence, therefore, is that Bristol's oversea pipe trade, at least to North America, had its zenith in the early C18 and that thereafter it declined, as did the industry itself in Bristol, until the colonial trade was disrupted by the Stamp Act troubles and the American Revolution and the diminished but still apparently reasonably well-off Bristol industry fell into ruin. The overall decline of smoking in England throughout the C18 fits into the background of this pattern; as probably does the sudden rise from ca.1760, contrary to the general pattern, of the Liverpool pipe industry, occuring as it does just as Liverpool is supplanting Bristol as the nation's second port.

Why there is such a lack of material from specifically mid-C18 Bristol makers - only George Viner (A 1740 F 1747 fl 1757 D by 1775) and possibly Thomas Grant (fl 1740s D by 1751) and the unspecified Edwards who made the Port Royal pipe belong to this period - when it is clear Bristol continued to export pipes into the second half of the century is uncertain, but the most likely reason is that as the Bristol industry declined the lucrative oversea market was kept in the hands of the older and established businesses. The apparent retrenchment of the Bristol industry ca.1740 into a few businesses of this type on the evidence of the apprentice- and burgess-rolls and trade directories (Sections III, IV, and VI above) would agree with this suggestion. It is also possible that as the century progressed Bristol makers tended not to mark their products as they had earlier done so helpfully for future historians and archaeologists, though why they would cease such useful advertising is not obvious; the Grant and Viner specimens both had their maker's name in a cartouche, indicating this typical Bristol form of marking continued until at least the mid-C18, and William Nicholas and George Ebbery used cartouches with their initials as late as the 1770s. Perhaps more likely is simply the vagaries of chance, together with the fact that historical archaeology in the New World is still a new field and that much excavated material has never been published, or at least adequately published. As only a minute fraction of pipes exported is found on excavations it is reasonable that as the amount of Bristol material exported declines an even smaller amount of it is going to be found. Equally, one is hampered by the limitations of indentifiable pipe material found so far in Bristol: John Frederick Bryant sr and his ten journeypeople must have produced pipes in large quantities, and he did export pipes, but no finds are yet known which can be attributed to him, either in Bristol or abroad.

Evidence noted earlier in this chapter indicates the Bristol pipe industry was at a low ebb at the end of the C18. A handful of makers did, however, struggle on until better days arrived after ca.1805, four of them - Anna Viner, John Carey, Joseph Edwards jr, and Samuel Richards jr - advertising in 1799 that they produced pipes for the West Indian, American, Irish, and Spanish markets and would produce "likewise Tobacco Pipes made exactly to Patterns, for Africa or any other Market" (advertisement among pages of Bristol Pipemakers' Guild Book). One of them, Anna Viner (fl 1775-1805, widow of George Viner noted above), appears to have managed to retain some of her dead husband's oversea trade. Her pipes have a typical enough London-derived later-C18 bowl shape, the name Viner in capitals with a large V facing the smoker inside a dashed circle, and either the letters A and V on the left and right side of the heel or a heart in their place. As noted above when dealing with home trade, by the last quarter of the C18 the bowl shapes typical of Bristol products of the earlier C18 had been replaced and cartouche-style marking still used in mid-century by Grant and George Viner was almost dead. Anna Viner pipes have been found at Fort Lennox, ca.30 miles SW of Montreal, Quebec province (Barka 1970: no pagination, pl 30 middle row second from rt) and at Fort Carleton (1778-1813) on Carleton or Buck Island, New York state, in the St Lawrence where it exits from Lake Ontario, on the Canada-United States border (Hagerty in litt. 14 March, 12 April, and 2 May 1967) (FIG 160).

Two bowls from Fort Coteau-du-Lac, Quebec province, can be attributed to one or both of the Joseph Edwardses working in Bristol in the second half of the C18 and the earlier C19. Joseph sr became free in 1747 and was still alive in 1792, though probably dead by 1794; his son Joseph jr became free in 1774 and was still working in 1823. Fort Coteau-du-Lac was founded only in 1779. One of the bowls has the letters IE in a cartouche on its right side and a branch pattern on its left, the other bowl has the same letters on the right side but uncircled and with a flower below the letters. The reasons for attributing these pipes to the Joseph Edwardses is discussed in detail above (section on home trade).

Documentary sources also indicate the export trade was not entirely dead at this time, for as already noted, 2 boxes of pipes were shipped to Quebec City on 24 March 1790 on the Polly and 3 boxes went to Norway and 12 to Spain later the same year (Minchinton (ed) 1957: 56, 62, 61). Further, Jackson and Price's work on port-book evidence show a steady trade to Ireland of from ca.300 to 700 boxes a year between 1773 and 1800 and shipments over the same period of from ca.350 to 1,200 boxes annually to other destinations, mostly the West Indies.

Between 1810 and 1850 the Bristol pipe industry steadily expanded again, but as noted earlier (4: II), from the 1760s into at least the early C19 Liverpool appears to have taken over Bristol's trade and become a major supplier of pipes to North America, and before the middle of the C19 Glasgow had certainly taken over as the major supplier of this market (4: IV). The products of only one C19 Bristol firm, Ring (fl 1803-1883 or 1884) have been identified in North America, all probably in first-half-of-the-century contexts. A relative by marriage of the Rings, Arnee Frank (B 1766, D 1859), recalled in 1857 that Richard Frank Ring (fl 1813-1848 or 1849) "was for several years a Pipe Maker, largely for export, chiefly for the American market" (quoted in Pountney 1920: 161-2). However, up to the later 1840s other firms must have exported also, for the anonymous correspondent to the Examiner (letter of 24 August 1850) indicated there had formerly been a large export trade to Canada and the United States by St Jude's makers (Ring worked at Temple Back, well away from St Jude's) but that "within the last three or four years, it has dwindled to little better than nothing". The firm of Ring and Cookworthy (fl 1802-17), also on Temple Backs, announcing their establishment in 1802, solicited orders from "Merchants, Captains and Ships, and Dealers..." (advertisement quoted in Pountney 1920: 259), suggesting they had an eye on orders for shipment abroad; Jackson and Price's examination of the port-books indicate that generally pipes were exported through middlemen but that a few makers, particularly the Joseph Edwardses, William Okely, the Samuel Richardses, John Ring and Co., and R.F. Ring and Co. did export their own products direct (R. Price in litt. 18 January 1974). In the period of the port-books covered by Jackson and Price, only one shipment from these firms to Canada is recorded - in 1810 when John Ring and Co sent 21 boxes to Quebec City and Montreal - but several such shipments to the United States are noted in the early C19: 89 boxes from John Ring and Co. in 1804; 20 boxes from the same firm in 1809; 200 boxes - to Philadelphia - from the same firm in 1810; 240 from R.F. Ring and Co. in 1815; 1,075 from W. Okely and Co. in 1817; 3,750 in 1818 from the same firm; and 215 from R.F. Ring and Co. also in 1818. In 1818, in fact, Okely and Ring between them exported most of the Bristol pipes which went to North America that year. In another entry, Joseph Edwards jr had shipped 28 March 1805 to Boston on the Venus 200 "bls" (Jackson and Price suggest either barrels or balls, but it seems possible to this writer it is a mistake for lbs) of tobacco-pipe clay.

To judge by the paucity of identified C19 Bristol material found so far in North America, it certainly seems a possibility that Bristol makers were tending not to mark their pipes with their name and place of work. None of the above-mentioned firms worked in St Jude's - indeed, by 1818, when Jackson and Price's work on the port-books ends, St Jude's was only just becoming the Bristol pipemaking ghetto - so the reference in the Examiner clearly indicates that products of other, later, firms should turn up on North American sites, but so far no such identifiably-marked pipes have been recorded. The Examiner reference also suggests it was the growth of the Glasgow industry in the 1840s which finally finished off Bristol's North American trade.

The sites producing Ring pipes are as follows (FIG 162):

Quebec

Chicoutimi trade post, 110 miles north of Quebec City (Simard in litt. 5 May 1972);

Fort Coteau-du-Lac, on the St Lawrence river 10 miles from the Ontario border (ex info. Miss E.A. Wylie);

Fort Témiscamingue, nr Ville Marie on the upper Ottawa river ca.45 miles north of Témiscaming (material in collections of the Research Division, National Historic Parks and Sites Branch, Ottawa);

Ontario

the York I site, nr York, on the Grand river in the Niagara peninsula (T. Kenyon 1971);

the Hunter site, (Armour's Point), nr Dunnville, on the Grand river in the Niagara peninsula (T. Kenyon 1971);

New York

Brodock Corners, nr Rome (Hagerty *in litt.* 4 February 1969);

Wyoming

Portuguese Houses, a trading post founded 1838 nr Kaycee in north-central Wyoming, between Casper and Buffalo (Wyoming State Archives and Historical Department, Cheyenne, *in litt.* 13 June 1968; R.L. Wilson 1971: 34, 70 fig 23, B-C and D).

In addition, there is a possible Ring bowl with R/R on the spur and leaf decoration along the mould lines on the front and back of the bowl, a type known in England from the West Country and the South-West (see above, home trade), from Port Royal, Jamaica (Oswald 1969: 45 no 96).

The Ring material from each site except Fort Témiscamingue and the Hunter site includes the firm's "Ohio" pipes, with RING BRISTOL lengthwise on one side of the stm and OHIO on the other. (The Fort Témiscamingue fragment was of a stem with [R]ING&C[O] impressed round it in small
[B]RISTO[L]
sharp letters; that from the Hunter site was a plain stem marked "Ring" and "Bristol" lengthwise in opposite sides.) What precisely an Ohio pipe was is uncertain, for there were certainly several varieties even among Ring's products. Stem fragments of Ring's Ohio pipes normally have the wording in capitals on a plain part of the bowl (see fig *b* Ring entry, Appendix IX), but fragments from the York I site appear to have the place-name omitted, the other two words with capital initial letters and the rest lower case, and Ohio mis-spelt as "Oiho" (fig *e*); and an example with the orthodox format and lettering from the Chicoutimi site has a line of small bird's-feet like marks above and below the lettering (fig *c*) (unfortunatly the piece is too fragmentary to show whether this variant also had the spiral decoration). There is a spiral-ridged stem fragment from Fort Coteau-du-Lac, Quebec province (see below), attached to an entire heeled bowl, which could well be an Ohio pipe, and the bowl is a standard enough fluted C19 type (fig *g*); however, the York I site in the Niagara peninsula produced a marked stem fragment but with a more elaborate spiral decoration and a plain, heeled, bowl (fig *f*; T. Kenyon *in litt.* 3 October 1972) and fragments with the same elaborate spiral decoration occur at the nearby Johnson and Middleport III sites (see below) and at the Chicoutimi site where what survived of the bowl indicated at least its lower part was undecorated. The Chicoutimi site also produced an Ohio-marked Ring stem fragment with the bowl heel attached and marked T/D (fig *d*), emphasizing there must have been varieties of bowls for Ohio pipes; and it is clear from the above evidence that Ring's themselves produced several varieties. A clear green glaze was noted on the mouthpiece of one Chicoutimi Ring Ohio stem.

Ohio pipes appear to have been popular throughout last century, for not only is Ring recorded in the Bristol trade directories as an "Ohio tobacco-pipe manufacturer" during the period 1816-48 but a 1900 pricelist of pipes made in Scotland notes (Anonymous 1900: 52) the Glasgow firm of Waldie listing an Ohio pipe among their products. As this pricelist is unillustrated it is unknown how closely this model would have resembled Ring's Ohio pipes; it is thus not possible to say categorically that stem fragments from nine other North American sites are Ring's products. They certainly appear to be extremely similar to Ring's Ohio pipes and the variations noted among these pipes from the sites listed above; but Jones of Liverpool pipes from Old Sacramento City, California, in an 1846-52 context also have a spiral ridging ended by double vertical lines to one side of the maker's name (Humphrey 1969: 17, 16 fig 8), though they do not appear to be marked Ohio. The nine other sites are:

New Brunswick

Fort Beauséjour (MacLean 1971: 41, 80 fig 31f) - a stem fragment with the spiral ridging typical of that occuring on Ring's Ohio pipes but with too little of the stem for any inscription to remain;

Quebec

Fort Coteau-du-Lac (material in collections of the Research Division, National Historic Parks and Sites Branch, Ottawa) - stem fragment with typical spiral ridging attached to heeled bowl decorated with fluting;

Ontario

Fort Wellington, nr Prescott on the St Lawrence river (Wylie 1971: 78) - typical spiral ridging, one piece attached to heel and bowl fragment, the latter being apparently fluted;

the Johnson site, nr Middleport, on the Grand river in the Niagara peninsula (T. Kenyon *in litt.* 18 July 1972) - typical spiral ridging;

the Middleport III site, at Middleport, on the Grand river in the Niagara peninsula (T. Kenyon *loc. cit.*) - typical spiral ridging;

Fort George, Niagara-on-the-Lake, where the Niagara River enters Lake Ontario, opposite the United States border (material in National Historic Sites Service collections) - typical spiral ridging;

Ermatinger House, Sault Ste. Marie, northern Ontario (Reid *in litt.* 14 October 1974) - fluted bowl identical to that from Fort Coteau-du-Lac (above) with enough stem to show the beginning of typical spiral ridging;

Massachusetts

Black Lucy's Garden, Andover, north of Boston (photograph in writer's files; excavation report Bullen and Bullen 1945 but stem not referred to there) - typical spiral ridging, with the grooves having small dots as with the definite Ring Ohio pipe from the York I site in Ontario (see above; also fig f);

Michigan

Fort Mackinac, Mackinac Island, near Mackinaw City, C19 successor to Fort Michilimackinac (Petersen 1963a: 8, illus. on p.7) - another typical Ring Ohio stem with OHIO on it; description, however, does not note any other wording such as name or place of manufacture, though it could have been lost by damage.

Additionally, there is a stem-fragment with spiral decoration from Fort Ticonderoga, New York state (Gifford 1940: 130, 123 pl IV fig 36), but to judge from its description as "a tapered pipe stem which has a broad raised band at the large end and a raised serpentine coil encircling the stem and extending from the raised band to the small end", as well as from the drawing, this is probably not a Ring Ohio pipe.

Among the Ring material from Fort Coteau-du-Lac are stem fragments with the same idea of decoration as the Ohio fragments but with the ribbing running parallel to the line of the stem. These are marked "Ring" on one side and "Bristol" on the other, both words having the initial letter upper case and the remainder lower case. No examples with bowl fragments attached are known. A similarly-inscribed fragment, but with no ribbing at all, came from the Hunter site.

What may possibly be a fragment of a Ring pipe in this style comes from the site of Sutter's Sawmill, where the California gold rush began in 1849, near Coloma 20 miles ENE of Sacramento (Fenenga 1947: pl 1,7). The fragment has frustratingly broken in the middle of the ribbed part so that any name of the stem between this part and the mouthpiece has gone; the opposite end of the fragment has the stem beginning to curve up, presumably towards the bowl, and decorated with what appear to be small overlaping shell motifs though the text (p.162) calls it a feather motif. Forma (1972: 51) notes a stem-fragment from the Hudson's Bay occupaion (1821-1904) of the Michipicoten Trading Post site at Michipicoten, northern Ontario, on the NE shore of Lake Superior, with "longitudinal striations [sic] similar to the 'Bristol Ring' style", but unfortunately the fragment is not illustrated. As with the "barber pole" spiral ridging of the Ohio pipes, however, there is no means of knowing how commonly this style was used by makers other than Ring, and no stems with the ridging parallel to the stem are known from Bristol (one, as noted when discussing home trade, is known at Tewkesbury Museum but it also is too fragmentary to show any maker's name which might once have marked the pipe).[81]

A particular feature of interest with Ring pipes is their occurence either certainly or probably at no fewer than five sites in the Niagara peninsula, four of them along the Grand river. The mechanics of distribution of imported pipes is still largely unknown, but the possibility there was a local agent in the area - perhaps at Niagara-on-the-Lake, which was the first capital of Upper Canada (now Ontario) 1791-96, a strategic military site until after the War of 1812, and then a major commercial centre for the Niagara peninsula for the first half of the C19 (Flemming 1971: passim) - who at one time had a contract with the Ring firm seems quite likely. As noted in 2:VII, a White of Glasgow pipe with BUSH & C^{o} AGENT moulded on the opposite side of the stem from the maker's name and place of work and a stem-fragment with McDougall of Glasgow's name and place of work on one side and -TRAND.AGENT on the other have come from two Canadian sites, indicating there were such agents, presumably on the New World side of the Atlantic, and that it was even considered worth the expense of mould-imparting their names on pipes. Suggestively, the Bush and Co.-marked White pipe in fact came from Niagara-on-the-Lake, having been found during excavations at Fort George there. Distribution-maps of pipe-finds may add to our knowledge of trade within C19 North America; the distribution of Ford of Stepney pipes coincides consistently with that of Hudson's Bay Company trading posts because the company obtained its pipes from Ford for much of the C19, and Ford pipes do not appear to have reached

North America other than through Hudson's Bay outlets, though probable examples of the firm's pipes are also known from as far away as Ascension Island and Australia (see 4: VI). The Niagara peninsula Ring distribution, indeed, may be compared to the concentration of possible Ring pipes in the Brixham-Dartmouth-Totnes area of South Devon (see preceding section).

As noted in Section VI above, the Bristol pipe industry collapsed in the 1860s and only three firms struggled into the C20. There is no archaeological evidence to indicate that any Bristol firm other than Ring (which closed in either 1883 or 1884) exported to North American, but as indicated above there had been an appreciable trade there until the later 1840s on the evidence of Arnee Frank in 1857 and the correspondent to the Examiner in 1850. However, the amount of Glasgow material recovered from excavations of C19 North American sites clearly indicates the Glasgow industry had an overwhelming proportion of the British clay pipe export market there by mid-century. In view of the continued export of Bristol pipes to South Africa up to ca.1900 noted earlier, however, a small amount of Bristol trade in pipes to North America may have persisted until the end of the C19; confirmation of this may have to await detailed study of Bristol's port books. After dropping the phrase "Ohio tobacco-pipe manufacturers" from their trade-directory entry in 1849 Ring's called themselves "export tobacco-pipe manufacturers" until 1879, suggesting the firm did continue to export their products into the second half of the century.

The only other Bristol pipe-manufacturer actually listed as producing for export is William White. Matthews's directories list him only for the period 1847-51 producing a variety of pottery as well as pipes at Redcross St and make no reference to his exporting but Slater's (late Pigot's) Directory for 1852-53, while inaccurate in recording him this late - Matthews has a successor at his address in 1852 - does refer to him producing "for exportation". No White of Bristol pipes have ever been seen by this writer nor do they appear to have been recorded in the literature, but as White of Glasgow and White of Edinburgh products have appeared abroad care should be taken to check the placename appearing on the side of the stem opposite an inscription "White" or "W. White" and not to assume it must be either Glasgow- or Edinburgh-made.

This William White may have been a member of a Bristol family of potters and pipemakers various members of whom made pipes in Bristol up to 1862 along with a range of pottery and some of whom emigrated to Saint John, New Brunswick, in the early 1860s to establish a firm which lasted until the end of the 1880s. A reference to this latter firm may be included here as a closing tribute to Bristol's pipe-trade with North America. The firm, Joseph White and Sons of the Courtnay Bay Pottery, Crouchville, Saint John, were certainly producing pipes in the 1880s, their products being described in 1880 by a party of businessmen from Manitoba (at least as recorded by an enthusiastic local newspaper reporter) as being better than those imported into Manitoba from Scotland - praise indeed, seeing that Scottish, or specifically Glasgow, pipes had established a market all over North America and indeed in many other parts of the world, in the C19 (see 4: IV). A grandson of the Joseph White of this firm, James W. Foley, was in business as a potter in Saint John with the firm Poole and Foley from ca.1880 to ca.1900 and later in business by himself with a firm which still exists, though now in Quebec province: in 1883 Poole and Foley were producing among other ceramic items tobacco-pipes of a "superior quality". (For a detailed description of the White family's businesses see 6: VI, see also Appendix IX under entries for White.)[82]

(c) PATTERNS OF RISE AND DECLINE

The pattern of trade in Bristol-made clay pipes and its relationship to the fluctuations of the Bristol pipe-manufacturing industry seems fairly clear from a consideration of the home and oversea trade outlined above.

The manufacture of clay pipes in Bristol was already established by 1619; and the first reference to a Bristol pipemaker, which occurs in that year, is to his taking an apprentice, suggesting business was adequate enough to need an assistant. This first pipemaker is Richard Berryman, perhaps a Londoner, who appears in the guild charter of incorporation in 1652 and was thus making pipes for over 30 years in the city. The widespread distribution of his products - Somerset, Wiltshire, Gloucestershire, Herefordshire, Monmouthshire, Glamorgan and as far away as Plymouth in Devon suggest he was a major supplier for a wide region. A younger contemporary, Edward Lewis, a native Bristolian, was taking apprentices by 1631; and he too built up a widespread trade in the second quarter of the century, his pipes occuring in Somerset, Wiltshire, Gloucestershire, Worcestershire, and Glamorgan.

Writing in 1960, Oswald (1960a: 41-5, cf figs 15 and 16) noted the rarity of pipemakers recorded outside London and Bristol before the second half of the C17, and while the subsequent decade of research has made certain modifications to that picture (Oswald 1970c: 226-8) it is still the case that outside London only Bristol before mid-century has any claim to having a pipemaking industry. As noted in Section I above, the Bristol industry probably existed in a semi-clandestine state at least until the end of the 1630s because of the Westminster guild's theoretical monopoly; but in view of Bristol's being the second city in the kingdom it is not surprising that it did have an industry, albeit unofficial, rather than merely one or two individuals. Oswald's 1960 map therefore, while underestimating both the number of pipemakers working in London in the first half of the C17 and the number of individuals working elsewhere in the country, is not substantially altered in its overall impression that pipemaking before ca.1650 had not yet become a local craft to be found in most places of consequence.

From this it seems safe to deduce that Bristol was the logical centre to supply pipes to the West Country, the lower Severn basin, South Wales, and into the South-West. This is probably the explanation for Berryman and Lewis pipes being traded over such a wide area, though as they were not the only Bristol makers of this period one may also suppose they had the biggest businesses and perhaps the best products.

This interpretation receives some support from Oswald's distribution-map of pipemakers of the second half of the century (1960a: 43 fig 16). This shows a marked concentration of pipemakers in Wiltshire - perhaps because tobacco was being grown here at this time (1: V) - and lesser concentrations in south Somerset and South Devon, indicating the spread of pipemaking as a country craft. When one examines the distribution within England of pipes made by Bristol makers active in the third quarter of the century, the Philip Edwardses and Richard Nunney, one finds that apart from three examples from north Somerset the distribution of these makers' products, while otherwise almost as widespread as those of Berriman and Lewis, does not reach into these areas. Indeed, as already noted, there may have been Wiltshire influence, in the form of John and Flower Hunt, coming into Bristol. The Edwardses pipes occur in (apart from Somerset), Gloucestershire, Herefordshire, Shropshire, Monmouthshire (particularly), and Glamorgan; those of Nunney, again excluding Somerset, occur in Gloucestershire, Monmouthshire, and Glamorgan as well as far outside the normal area, in London and Nottinghamshire. It is during this period - between 1657 and 1664 - that Bristol pipemaker Thomas Cullimore apparently moved to Gloucester; and the three shipments of pipes - two each of "twoe boxes" and one of "one boxe" - from Bristol to Caerleon recorded in 1656 in the Caerleon port-books (Talbot 1969: 131) offer only the barest glimpse of the Bristol trade to South Wales. All this suggests trade up the Severn and its tributaries and to South Wales in the third quarter of the century was still continuing as in the previous quarter-century while the markets east and south of Bristol at least had been effectively closed because of the rise of local industries. Before the end of the C17, as will be noted, the Broseley and Herefordshire industries were to largely take over in the Severn basin and Welsh Marches.

Of particular interest are the Bristol pipes from Raglan Castle in Monmouthshire, for they can with some plausibility be related to known historical events. During the Civil Wars Raglan Castle was a major Royalist centre in the west, and its siege and eventual surrender in the summer of 1646 marked the effective end of the First Civil War. Following the siege, the castle was allowed to be plundered, and lead and timber from the site were taken the seven miles to Monmouth where they were auctioned and much brought by Bristolians who shipped it on rafts down the Wye and across the Severn to Bristol, where it was used in the rebuilding of some two dozen houses on Bristol Bridge which had been destroyed by fire "some months previously", on 17 February 1646/7 (J. Evans 1824: 209, Latimer 1900: 216-7). It is tempting to suggest that the Bristol pipes found at Raglan Castle - three the products of Richard Berryman, three those of Philip Edwards - are associated if not with this specific event at least with other subsequent looting (cf A.J. Taylor 1950: 21-2, 1970 impression). One cautiously adds this last, partly because while Berryman's dates fit, Philip Edwards sr frustratingly did not become free until March 1649/50 which on the face of things should date his pipes to no earlier than then, almost three years later than the rebuilding on Bristol Bridge. However, even if Edwards was not making pipes before taking his freedom, one may guess that such a convenient source of building material was a long-standing attraction to enterprising individuals from a major centre such as Bristol.

During the second half of the C17 Bristol's pipe-industry changed from a predominantly home-oriented business to a major oversea speciality-trade. This may have been encouraged as policy following the setting up of the Bristol pipemakers' guild, which as noted in Section I above appears to have been the product of a conscious desire on the part of the City Fathers to foster the industry presumably for the city's economic benefit, but with the rising prosperity of Bristol as a port serving the New World the advantages of establishing a corner in this trade with specialist products must have seemed obvious enough to more than one pipemaker. Further, as pipemaking spread at home into smaller centres and rural areas it must have become progressively less rewarding to trade into the Bristol hinterland when there was a major captive market across the Atlantic. The Philip Edwardses - probably mainly Philip sr - and Richard Nunney are the last Bristol pipemakers whose products occur in significant numbers in England and Wales, and both (or all three) were also exporting to North America; the virtual lack of products of Llewellin Evans and the two William Evanses in England and Wales and the widespread finding of their products in the New World strongly suggests that by the time these younger contemporaries of the Edwardses and Nunney were in business - from, say, the 1660s and 1670s onwards - supplying the oversea market was fully occupying Bristol pipemakers.

An intriguing possibility, and one which might find confirmation in a study of the port-books, is that there were Bristol agents in colonial ports or in France (Robert Tippet pipes are relatively frequent in French contexts in North America) for some of the pipemakers during the period of greatest Bristol export of pipes to that continent. There is no actual evidence to suggest there were, but such arrangements were not unknown: one Staffordshire pottery firm had agents in 1743 at Bridgwater, Falmouth, Plymouth, and Exeter while another had one in Amsterdam in the 1740s to 1760s and regularly shipped him crates of pottery every two months or so, sometimes over 100 at a time (Rowlands 1968: 52; Mallet 1966: 126-7; Weatherill 1971: 88); there were a number of Bideford agents in C17 Virginia connected with the tobacco-trade who were no doubt involved in the reciprocal trade in North Devon earthenwares which appear in the C17 and C18 in the American tobacco colonies (C.M. Watkins 1960: 23 and passim; cf p.870 above); and ca.1783 the brother of an Andenne faience-maker lived at Gouda and acted as agent there for Andenne clay (3: IV). Further, one may suspect that some of the parents of boys apprenticed in Bristol in the C16 and C17 and listed as from Ireland, France, and Jamaica (Sub-section (a) above) were sons of Bristolians living abroad as agents either in their own interests or for someone else. In any event, the possibility seems worth investigating, both from the Bristol and North American ends.

That Bristol gave up her home market to concentrate on the oversea trade is also suggested by the emergence of other home pipe-industries elsewhere to successfully establish themselves as serving an area at least as large as that which Bristol had earlier in the century. The Herefordshire industry, though it has yet to receive any systematic study (cf A. Watkins 1935), was producing a characteristic bowl form with some similarities to Broseley pipes from farther north by the second half of the C17; and going no farther than the counties covered by this writer as being likely to have Bristol material, Herefordshire or Herefordshire-style pipes were noted in collections as far apart as Nuneaton and St Fagans and covering the counties of Glamorgan, Monmouthshire, Gloucestershire, Herefordshire, Worcestershire, and Warwickshire. Their distribution to the north and west remains unknown, but examples occur at Montgomery Castle in Montgomeryshire, central Wales (J.M. Lewis 1968: 148, fig 7,4-5 and 8).[83]

Another example of specialization in home trade is the pipe-industry of Broseley in Shropshire. D.R. Atkinson's major study of this industry is expected to be published shortly, but evidence available at present suggests that from a start in the second quarter of the C17 with a London-style bowl - indeed, similar to that used by Berryman in Bristol at this time - the Broseley industry grew rapidly, producing characteristic Broseley bowl-shapes from ca.1660 onwards (for Broseley history see meanwhile Oswald and James 1955a: 187, 188; for revised dating of Broseley bowl-styles see Oswald 1970c: pl 201). With the growing reputation of the Broseley industry for high-quality products its characteristic later C17 bowl-forms appear to have been widely copied in central England. Atkinson (*in litt.* 24 April 1972) believes actual Broseley-*made* pipes tended not to be sold very far afield of the immediate vicinity of Broseley but that Broseley-*style* pipes, on the other hand, had a widespread distribution.

Certainly in the area covered by this writer on museum visits, Broseley and Broseley-style pipes covering the second half of the C17 and the early C18 were widespread. They were observed as far south as Weston-super-Mare in Somerset and from the counties of Pembrokeshire, Carmarthenshire, Glamorgan, Monmouthshire, Gloucestershire (including Bristol - Thomas Hartshorne example Pritchard 1901: 280; Richard Harper example Reed 1961: 282, 275 fig 12,14; Morris Shaw example on display in City Museum 1969), Herefordshire, Worcestershire, Warwickshire, and possibly (E. Watkins 1966: 219, fig 1,9) Dorset; while material at Birmingham included examples from Oxfordshire (cf Oswald 1970b: 244 and pl 211 btm left), Leicestershire, and the West Riding of Yorkshire. Oswald's distribution map of his Broseley type 5, a form datable to ca.1680-1720, and other references to Broseley and Broseley-style pipes both of that period and earlier, indicate a yet wider distribution, extending into south Somerset and south Wiltshire (cf two examples from Marlborough, Atkinson *in litt.* 24 April 1972), Derbyshire, Staffordshire (cf Kelly 1969: 20; Celoria and Kelly 1973: 63 figs 61-2, 40), Cheshire (cf G.C. Spence 1942: 50, 52 pl V,3, 54, 55), and central Wales (cf J.M. Lewis 1968: 147-8, fig 7 *passim*), and as far away as London (cf Sanford 1968: 9; Atkinson *in litt.* 27 June 1974) and Cambridgeshire (Oswald 1960a: 47 fig 20, 48). Broseley-*style* pipes are also known from North Wales (Butler 1964: 128, fig 9,2) and as far afield as Essex (Gant 1959c; 1967a) and the North-East (Parsons 1964: 240). However much of this spread may be of Broseley bowl-styles rather than actual Broseley products it is still clear Broseley pipes had become famous enough to enjoy a wide reputation and much immitation.

On the other hand, the scarcity of Broseley or Broseley-style material from North America suggests that market was not sought. Broseley or Broseley-style pipes did reach the New World (Oswald 1960a: 48), but only scattered finds are known: from Massachusetts (Deetz 1960a: 8th page; Snow *in litt.* 6 June 1967); Virginia (J.N. Pearce *in litt.* 24 December 1963 and Pawson 1969: 123, 122 fig 2,14); North Carolina (Mrs H. Camp *in litt.* 19 December 1972); and Jamaica (Omwake *in litt.* December 1966 and Oswald 1968: 25 no 28, 81 no 193); and possible examples from Maine (heel fragment at Pemaquid seen by writer November 1972) and Nova Scotia (I. Walker 1971c: 116

fig 47 rt, 115-6). This reinforces evidence above that the Broseley industry and its immitators concentrated on the home market.

As is to be expected with Broseley being only a mile from the Severn at Ironbridge, the Severn basin has a particularly heavy concentration of Broseley and Broseley-style material. The collections at Tewkesbury and Stratford-on-Avon, for example, are almost entirely of this material, and sizable quantities were noted at Worcester, Cheltenham, Gloucester, Stroud, Hereford, and Abergavenny. No work has yet been done on pipemaking at Gloucester, but material at Stroud suggests Broseley makers migrated down the Severn and established themselves there. Broseley makers used a distinctive mark comprising their name in two or three lines of text raised from a depressed background and separated by a raised line in a rectangle or square either on the characteristically large heart-shaped heel or on the stem (e.g. R. Thursfield 1863: pls VIII-X; T.H. Thursfield 1907: pls 1-6; Oswald and James 1955b: figs 1-2); and one such-styled mark at Stroud (from the town itself) reads SACTO/GLOSTR/FROM/BROSL, indicating a maker, whose name is unfortunately not clear, had come "to Gloucester from Broseley".[84]

Another Broseley-style mark on Gloucester-made pipes is RICH/MATH/EWS/GLOS. Rather surprisingly, none were noted in the Gloucester collections, but even excluding fragments too small to show the entire inscription (and which therefore might possibly not have had the line indicating "Gloucester") at least seven definite examples are at Stroud (from Slad, Frocester, Selsley, and Stanley Downton, and three from Leonard Stanley). Oswald (*in litt.* 2 April 1974) notes a stem marked RICH/MAT/HEW/S from Nailsworth, only four miles south of Stroud, the mark in this case being an apparent combination of Broseley and Wiltshire-Hampshire traits, with the letters raised but with a sub-circular surround and with no raised lines separating the lines of letters (the Wiltshire-Hampshire stem-mark has the maker's name impressed in lines within a circle, see p. 614 above). A Nicholas Matthews is noted as a "pipemaker deceased" of Gloucester in April 1719 when a son Richard is apprenticed to a Bristol glassmaker (perversely, the same Nicholas is referred to, again as a pipemaker deceased, as of *Bristol* in April 1716 when another son, John, was apprenticed to the same glassmaker; but there is no other reference to a Nicholas Matthews pipemaker in Bristol known, and the Gloucester reference is almost certainly correct).[85] This indicates a Matthews pipemaker was in business in Gloucester by ca.1700, though he need not, of course, necessarily have come from Broseley; no pipemakers of that name are at present known from Broseley. According to Gloucester Public Libraries, to whom I am grateful for this information, none of their available C19 sources lists a Mat(t)hews pipemaker in Gloucester during that period.

Unfortuntely there are as yet no dates for Richard Mathews of Gloucester, but Alan Peacey, who is at present studying pipes from Gloucestershire and to whom I am grateful for this information, has noted that Bristol material is replaced by Wiltshire material and this in turn by Broseley; and as Wiltshire and Broseley pipes in Gloucestershire collections are appearing by 1700 one might expect Broseley makers to be following their products in the early C18.

Other examples of the spread of this Broseley-style marking are stem-marks used by two Bristol makers, George Ebbery (F 1721, fl 1781) and either George Viner (F 1747, D ca.1775) or possibly his widow Anna (fl 1775-1805). Two stem-fragments at Bristol read EB/BERY/BRIS/T[OL] and one from Louisbourg reads VI/NER/BRIS/TOL in typical Broseley fashion. When Ebbery became free it was noted he had been apprenticed to William Taylor, but unfortunately his apprenticeship entry has not been found, so that it is not known whence he came, though it is overwhelmingly probable he was a Bristolian.[86] George Viner was the son of a Bristol joiner and originally apprenticed to Charles Hickes, but subsequently he became an apprentice of George Ebbery, from whom he no doubt borrowed this form of marking. Unfortunately too, Ebbery's products covered on historical grounds much of the C18 - at least 60 years - and this is confirmed by their typological variety (Appendix IX) and a well-dated late find from North America (preceding sub-section). As no bowls have yet been found with these Broseley-style marked Ebbery stems no precision can be given to the dating for this marking, but as this form of marking occurs on no known products of the very numerous first-third-of-the-C18-century Bristol makers whose pipes are well known, and as the Viners cannot have been using this form of marking prior to mid-century, it seems more likely it is a mid- and later-C18 introduction, though Ebbery could conceivably have been using it from as early as the 1720s; bowls with GE raised in a cartouche on the right side and the same letters impressed facing the smoker a la Robert Tippet are typical enough Bristol bowls of the earlier C18, indicating that in these aspects at least Ebbery followed Bristol markings of that period.

The same Broseley-style marking occurs on other pipes with West Country type 9 bowls. Benjamin Abbott, whom Oswald notes (1960a: 55) working at Ramsden in western Oxfordshire in 1758, used a typical Broseley stem-mark reading BEN/ABB/OTT, and examples are known from Oxford (Oswald 1970b: pl 213, p.244) and at Filkins. The bowl on the Filkins pipe, however (the Oxford example is only a stem fragment), is an entirely typical earlier C18 West Country Oswald type 9 bowl, suggesting that whatever Broseley traits Abbott adopted, or conceivably brought, he used a more local bowl form. Other typical bowls of this form, one from Hailes Abbey near Winchcombe in Gloucestershire (Oswald in litt. 28 May 1969) and another from Coventry, have the same Broseley-style stem-markings reading IOHN/BOW/LDS, and two similarly-marked Bowlds stems also come from Coventry (Coventry material in the museum there). Bowlds is otherwise unknown, but the occurrence of his products in the middle Severn basin suggests he may have been a maker in that area combining the orthodox West Country bowl-shape of this period with the Broseley-style marking known to have spread down the Severn to Gloucester and Bristol (see above). (A.J. Bold is recorded A 1723 at Maidstone (Oswald in litt. 16 June 1972), a date which would fit the typological dating of the bowls, but one would have to assume he had crossed the country on finishing his apprenticeship and there adopted local pipe forms.)

When these distributions of Herefordshire and Broseley pipes are compared to the virtual absence of Bristol material beyond that city from the last quarter of the C17 onwards into the C18, it is clear that Bristol makers were no longer interested in home markets. In all cases where there is both Bristol and Brosley or Herefordshire material in collections - Monmouthshire, Herefordshire, Gloucestershire, and Worcestershire - the

Bristol material is confined to the middle decades of the C17 and the other succeeds it, suggesting the latter was expanding into areas which had hitherto looked towards Bristol for their pipes. As this is the very period Bristol's pipe trade abroad was rapidly expanding - witness the frequency with which pipes made by the Philip Edwardses, Llewellin Evans, and the William Evanses occur in North America - it is clear that Bristol pipemakers had lost their interest in holding their home markets and were turning their energies towards presumably more lucrative oversea markets.

The first three decades of the C18 see the zenith of Bristol's trade in clay pipes with North America. The organized nature of the industry at this time is hinted at by pipes bearing double makers' marks - Robert Tippet II and Isaac Evans, Robert Tippet II and Henry Hoar, Isaac Evans and ER, among others (see Sub-section (b) above) - which suggest partnerships or contracting out of work by the major makers. Bristol pipes, dominated by the products of the Robert Tippet family, occur everywhere there is white settlement in eastern North America in the earlier C18, from the St Lawrence to the Gulf of Mexico, from Newfoundland to Florida, and as far west as Mississippi and Michigan (FIG 151) and indeed, to judge by the frequency with which they have been found on native sites, in areas beyond white settlement. Bristol pipes occur frequently also at the Port Royal, Jamaica, which was a British possession from 1655.

The reason for the sharp decline ca.1740 both in pipemaker-apprentices being taken and in pipemakers becoming freemen is uncertain. As a decline in the number of apprentices taken would not normally show in the burgess-roll entries until seven or more years later - apprenticeships being for that length - the coincidence here of the two dates suggests some major external event had caused a sharp drop in the number of pipemakers working, and presumably also in the prosperity of the trade. North American archaeological evidence, as noted in the preceding paragraph, indicates the three decades preceding 1740 appear to have been the heyday of Bristol's export trade and presumably of the pipemaking industry itself, but Bryant's reminiscences would indicate the industry, however much apparently diminished ca.1740, was still prosperous enough until the mid-1760s.

No specific evidence for this ca.1740 decline is offered in Latimer 1893, but adverse trade conditions brought about by the War of Jenkins' Ear and the War of Austrian Succession (1739-48) may have been the reason. Latimer does note (1893: 236) that English trade did suffer severely at this period, with Spanish privateers off every port, and that Bristol was particularly hard hit. In 1742 the Merchants' Society of Bristol petitioned the Commons to make more adequate provision for the protection of commerce, alleging trade was becoming daily more precarious. According to Latimer the local clothing trade suffered a check from which it never recovered and pauperism markedly increased, though a prosperous harvest in 1743 brought some relief to the clothing trade and to other city industries in 1744 (Latimer 1893: 236, 259).

It seems quite possible, therefore, particularly bearing in mind that it was two similar types of interruptions to trade in the mid-1760s and -1770s which almost killed the Bristol pipemaking industry, that the outbreak of hostilities in 1739 caused a sharp drop in the fortunes of an industry which had specialized so exclusively on the export market. With the sudden loss of much of this trade, masters would cease to take apprentices and would lay off journeymen. The younger journeymen in particular would be the source of potential freemen when voters were sought or drives made to enforce the freedom laws, and a scattering of such people now out of work would account for the sudden decline of entries in the burgess rolls. There is indirect evidence for something of this sort from the poll-books, which show a steadily-increasing drift of pipemakers away from Bristol from the 1730s; and also from the first trade directory of 1775 which suggests the then pipemaking businesses were old-established family concerns and reinforces the idea there was relatively little scope for fresh apprentices and journeymen.

After ca.1740, therefore, the Bristol pipemaking industry, while still relatively prosperous, retrenches itself in a smaller number of established family concerns. As the century progresses the amount of known Bristol material declines, but Bryant's reminiscences indicate that Bristol pipemakers remained relatively prosperous until the Stamp Act troubles of 1765-66; and pipes continued to be shipped to North America until the American Revolution started in 1775.

After the American Revolution Bristol pipemakers never recaptured the North American trade, which already from the 1760s had begun to be supplied particularly from Liverpool, which centre continued to hold this market into the earlier C19 only to be replaced in its turn from the 1840s until about the 1880s by Glasgow; but scattered finds of Joseph Edwards and Anna Viner pipes datable to the end of the C18 and the beginning of the C19 and of Ring pipes probably all datable to the earlier C19, show, as does what port-book evidence is at present available, that an attenuated trans-Atlantic trade in Bristol pipes did restart after the American Revolution and continued, on the evidence of pipemakers of the time, until the later 1840s.

The C19 also sees a revival, to a limited degree, of Bristol home trade. The Okely business in the first quarter of the C19, the Rings who were in business for most of the century, and the Hawleys who possibly took over from the Rings in 1883 or 1884 and continued until the beginning of the C20, made pipes which reached Somerset, Gloucestershire, and Monmouthshire. In the last decade of the century, one firm, almost certainly that of Corcoran, was producing "personalized" pipes for an hotel in Swansea and for another in Devonport. By the time the Hawleys and Corcoran were in business, however, the Bristol pipemaking trade was almost dead; and in December 1921 the last Bristol maker closed.

With the advent of the C19 the Bristol pipe-industry revives, picking up ca.1805 and steadily increasing to reach a score or more businesses in the 1840s and 1850s. In the 1860s, however, there is a dramatic and final crash: the number of recorded makers drops almost a third between 1863 and 1867, and by 1900 only three firms were left. Although a few of the early C19 are related by apprenticeship or descent to those in business in the prosperous times of the C18, the C19 industry seems to owe little to traditions from that period. Quite suddenly, and for no known specific reason, the industry migrates in the 1810s to the area at that time and until 1835 immediately outside the eastern city limits subsequently known as St Jude's; and from that time the industry becomes progressively entrenched there as pipemaking premises elsewhere in the city disappear, the last firm of all working there from its first reference in 1815 to its closure in 1921. In 1850 an account of the life of a woman-pipemaker doing work contracted out from one of the businesses in the area indicates chronic poverty both among workers in the pipemaking trade and in the St Jude's area in general, despite the fact that ca.1850 the Bristol pipemaking industry was at its C19 zenith; and certainly before the end of the century accounts indicate St Jude's was one of the worst slums in the city.

In the C19 the major rival to Bristol in its home market was again the Broseley industry, or to be more specific the business of the famous Southorn family of Broseley, whose products were widespread and renowned in the second half of the century (Appendix II). Indeed, to judge from museum collections the family completely dominated the Broseley industry at this time, for with the exception of the occasional Smitheman-marked product all the C19 Broseley material noted by this writer extending through South Wales and the West Country and as far south as south Devon, Dorset, and Hampshire is Southorn-made.[87] In 1884 indeed, as noted in Section VI above, T. Lovett of the "Greyhound" inn at Bristol advertised himself as an agent for Southorn and company, indicating the dominant position of the firm. Outside the area covered by this writer products of the Southorns are noted from as far away from Broseley as Sussex (Atkinson 1958: 120). At the beginning of the C20 the Southorn in charge of the firm was quoted (in Randall 1908: 442) as claiming he had never had greater demand than at the present time, suggesting Southorn was still prospering at a time when the Bristol industry was virtually dead.

The reason for the Southorn family's fame as pipemakers undoubtedly lay with their superior-quality products, and there is other evidence in the museum collections examined by this writer to suggest that while the clay-pipe industry in general was dying in the second half of the C19 and its products more and more associated with the poor and the working classes, fashionable people were prepared to continue with clay pipes provided their quality and appearance were suitable to their tastes. As well as the half-full crate of Belgian pipes from Gisclon of Lille at Wimborne Minster (noted in 3: IV, see FIG 107), several products of the East London family of Crop (4: VII), who specialized in superbly-crafted effigy and other bowls as well as producing more ordinary-shaped pipes, occur in these collections, as do a few products of the famous French firms of Gambier, Fiolet, and Scouflaire (3: V) and possibly those of the Westerwald firm of Müllenbach and Thewald (3: II), all of which suggest a continuing if attenuated market later last century for the more sophisticated types of clay pipe - the tobacconist who stocked the Gisclon pipes at Wimborne Minster also had a crate half full of Southorn pipes, suggesting the social equality of the two firms' products. One may perhaps suggest, therefore, that the various Bristol firms of last century or at least the later part of it were unable to produce pipes sufficiently good to attract this class of smoker; as noted in Section VI above, apart from there being a Southorn agent in Bristol in 1884 there was also listed in the trade directories under pipemakers for that year an "Importer of fancy goods" and in 1899 a firm claiming to be "the largest importer of French pipes in the West of England".

There is perhaps one area of study which may modify, or at the very least add considerable detail to, the pattern of Bristol's oversea pipe trade, and that is the Africa trade. Historical archaeology in West Africa is only just commencing, and few reports of work done are available though pipes have certainly been among artefacts found.[88] In view of Bristol's part in the slave trade in the earlier C18 one must assume that a very considerable amount of Bristol pipe material is likely to be found on excavations of trading forts and contact-period native sites from 1700 onwards and possibly earlier. Thomas George's family recollections of pipemaking in Bristol in the early C19 may be confused, but his reference to pipes being made for the West African trade at this time can be associated with historical records for the period, suggesting Bristol trade with West Africa continued, or was revived, in the earlier C19. Then again, when George's closed in 1921 it was noted that until ca.1900 the firm had exported to South Africa, indicating there was a long-standing export trade in pipes to Africa extending, perhaps discontinuously, over some 200 years about which at present nothing is known either as regards shipments or material to be found from excavations.

So, with the closing of the George firm in December 1921, over 300 years of continuous pipemaking in Bristol ended. Much of the trade had been for export; probable products of Richard Berryman, the earliest-known Bristol pipemaker, occur in Maine and Virginia, and pipes of Edward Lewis I, another early Bristol pipemaker, have also been found in Virginia, indicating oversea trade as early as the second quarter of the C17 while the George firm as noted above was exporting to South Africa up to ca.1900. If home trade occupies a much less spectacular position in Bristol's pipemaking history it did provide in the second and third quarters of the C17 pipes for a large area of the lower Severn basin, restarted a C19 pipemaking industry in Swansea, and was managing to sell pipes in the counties surrounding Bristol and custom-marked products as far away as Swansea and Plymouth as late as the end of the C19.

SECTION VIII:
ST JUDE'S AND ITS 19TH-CENTURY PIPEMAKERS

The C19 pipemakers' ghetto referred to here and earlier in this work as St Jude's comprises the small area between the Frome and Lamb St-Lawfords Gate-Pennywell Rd occupied by Great and Little George Sts, Great and Little Ann Sts, New St, Wade St, and Eugene St (FIG 167). Prior to 1835, when it was included within the extended Bristol city limits, this area lay immediately outside the city, the boundary in fact passing through the back-gardens of the properties on the SW side of New St (FIG 168). The area was part of the vast parish of St Philip and Jacob which at one time extended from inside the city as far west as Bitton, half-way to Bath, the part outside the city being known as St Philip and Jacob Out-parish and the part inside being called the In-parish (Ralph and Williams 1968: xx-xxi and refs). St Jude's as a name for the pipemaking area is historically correct only from the building and dedication 1848-49 of St Jude's church at the angle of Lamb St and Bragg's Lane overlooking, or more accurately in, the complex road junction formerly known as Pointz Pool; however, for brevity and convenience the term will be used for the area from its first development at the beginning of the C18 onwards.

It must be emphasized that this survey of St Jude's is strictly preliminary. The area proved to be an unexpectedly fascinating topic of research, but one which unfortunately would have become a major and entirely separate study in social history had it been pursued to its logical conclusions. The survey relies primarily on a brief examination of readily-available published material - mainly C19 accounts of poverty in the area - on evidence from standard sources such as Latimer and from some of the maps and plans dating from the later C17 to the present day which include the area, on trade directory evidence, and on several visits to the area to take photographs and talk to locals. There is, however, a rich store of property-deeds for the area in the Bristol Archives Office; a brief perusal of these indicated many go back to the original development of the area from the first decade of the C18 onwards, but it was impractical in the time available to study even those documents relating to pipemaking properties. A study of these records would be greatly rewarding to social and economic historians of Bristol, for no study has yet been made of this apparently planned eastern suburb of the city.

To this writer, it would appear that industrial archaeology should be the ideal field from which to make such a study. In the Introduction to this work, this writer referred (p. 7) to the need to direct history towards its ultimate goal - the human aspect, and how people lived; and in the Conclusions (pp. 768-80) the same point is made, with specific reference to the future of industrial archaeology. There is, basically, no especial importance to be attached to clay pipes, either in themselves or as archaeologically-recovered objects: it is the evidence they yield which is important, and in this particular instance the evidence has ultimately led this study to where and who manufactured these pipes. The following section is strictly a preliminary study, as stressed above; but it is a glimpse at what archaeology should ultimately be striving for, namely greater knowledge of how people lived, and it is hoped that it will stimulate interest in an interdisciplinary approach to such a research project on St Jude's, and perhaps from that to other working-class area studies both in Bristol - e.g. St Philip's Marsh - and in other industrial centres.

In the C19 and into the C20 St Jude's was probably the worst slum in Bristol, but progressive clearance from the early 1930s into the 1960s and the erection of large corporation multi-storey dwellings have largely removed the older properties and to some degree modified the original layout of the area. Unfortunately, Bristol had no Mayhew or Booth in the C19 to record its slums and no publication comparable to the recently-deceased East London Papers with its interdisciplinary approach to local history, nor has St Jude's benefitted from studies of the kind made in the 1950s and 1960s on social life and change in East London (Young and Willmott 1957, 1962 ed; Townsend 1957, 1963 ed; Willmott 1966, 1969 ed); but there are two C19 accounts of the squalor and poverty in St Jude's which, if they lack the approach of Mayhew and Booth, lose little in their directness of reporting.

The pipemaking area as defined by the roads above forms an approximate rectangle and appears to have been deliberately planned as a single piece of urban planning, for it conforms to a rectangular grid pattern and may perhaps be the first example of such planning in Bristol, dating as it does to the early C18. The long axis, which runs SW-NE, is that of Great Ann St-Little Ann St and Great George St-Little George St which runs parallel to the former and to its NW. These are bisected, though not at their midpoint, by Wade St, which runs NW from Lamb St-Lawfords Gate cutting the long axis of the development at right angles and, by crossing the Frome and becoming Houlton St and joining Newfoundland St-Newfoundland Rd (to use the modern names for these latter streets) gives what even today is the only access to the area from the NW. Wade St divides George and Ann Sts into "Great" - SW of Wade St - and "Little" - the shorter part to the NE; why there should be this division in nomenclature is uncertain, for on the face of it there seems no reason unless the development NE of Wade St, though clearly planned from the beginning, commenced later enough than the other side that someone regarded the areas as separate enough to have modified names. There is some support for this suggestion from various C18 and C19 plans: Rocque in his Plan of the city of Bristol 1742 (FIG 169), though he appears to show all the area except part of the NW side of Little George St built up, has "George's Street" and "Ann's Street" SW of Wade St and no names on their continuations NE of Wade St; Donne in his Plan of the city of Bristol delineated from actual survey published 1773 (FIG 170) names "Great Georges Street" and "Litt. Georges Str" but has only "Anns Str" SW of Wade St; while Ashmead in his superbly-detailed Plan of the city of Bristol and its suburbs of 1828 (FIG 168) has "George's Street" and "Little George's St", and "Anne Street" and "Little Anne Street"; all of which wordings tend to suggest Little Ann and Little George Sts were subsequent extensions to the original streets SW of Wade St.

The NE end of the rectangle is Eugene St, which runs parallel to Wade St from Pennywell Rd (to again use the modern name) across the NE ends of

Little Ann and Little George Sts and terminates with its junction to the latter. The SW end is delimited by New St, which runs from what was formerly Pointz Pool, now the beginning of Lamb St, across the ends of Gt George and Gt Ann Sts but does not parallel Wade and Eugene Sts, following instead the line of the pre-1835 city boundary here running somewhat west of NW and thus making Gt George St slightly longer than Gt Ann St. Beyond its junction with Gt George St, New St continued its line towards the Frome until it came to what was originally the Friends' Workhouse (see below - site now occupied by the New St Flats, adjacent to the present Friends' meeting-house on River St). From the Workhouse there appears always to have been an open way along the SE bank of the Frome to Wade St - it is so indicated but with no name by Rocque in 1742 (FIG 169) and Donne in 1773 (FIG 170) - and this is River St on Ashmead's 1828 plan (FIG 168) and exists as such today, but though Rocque indicates paths from the river at Wade St to Little George and Eugene Sts no continuation of River St NE of Wade St was ever built.

Very little is known of the history and development of the St Jude's area, particularly in the C18. Matthews appears to be the earliest writer to refer to it, noting in the introduction to his Directory for 1793-94 (1794: 30) that "The names of Ann Street, George's and Eugene streets, leave to doubt of the times in which that populous suburb to the East was planned and built", from which one assumes Ann St was named after Queen Anne (1702-14) - who visited Bristol in 1710 - and presumably George and Eugene Sts after, respectively, Anne's husband Prince George (D 1708) and the Austrian general Prince Eugene who was Marlborough's second in command during his campaigns between 1704 and 1709. Latimer is more specific. The suburb beyond Lawford's Gate was being developed apparently from the late 1650s, for in 1660 the City Council "taking note of the great number of cottages lately erected and now erecting outside Lawford's Gate, and conceiving it to tend to the great impovrishment of the city" tried unsuccessfully to stop the landowner, Mr Chester, from further building (quoted in Latimer 1900: 300; cf Millerd's 1671 plan - FIG 171): at the beginning of the C18 this area was still the only real Bristol suburb and was occupied "by a few hundred weavers, colliers, and market gardeners" (Latimer 1893: 3), but ca. 1711 (ibid. 92)

> A considerable extension of the eastern suburb...took place...by the construction of Wade St, reat George and Great Anne Streets, etc. The owners of the ground, Nathaniel Wade and Abram Hooke, built a bridge in 1711 over the Froom, at Wade Street, for the development of the estate; and as Wade, though holding an important office under the Corporation, was generally unpopular from his abject confessions to James II., after being a leader in the Monmouth rebellion, the construction was universally known as Traitor's Bridge, and is even so designated in the minutes of the Common Council.

Wade St was thus clearly named for Nathaniel Wade, who died in 1717.

The development of the area can also be seen on later editions of Millerd's An exact delineation of the famous city of Bristol and suburbs which first appeared in 1673. With the exception of two apparently connected buildings on the NE side of Pointz Pool (now the SW end of Lamb St) and gardens and an orchard extending from these buildings SW to the properties on The Back Lane (part of Redcross St by 1742) which must have occupied the SE end of New St, the first edition of this plan (FIG 172) shows St Jude's to be entirely open, and one of idyllic pastoral charm to judge by the Latin dactylic hexameters penned with unwitting irony across it:

> Huc sua quosque trahit iuvenesque senesque voluntas
> Grammina nonnulli nonnulli flumina poscunt
> Hic tardi celeres capiuntur arundire pisces
> Hic lassi modico recreantur membra natatu
> His quoque contemplans studiosus inambulat artes
> Et laetus laetam comitatur amicus amatam

The area may in fact have been water-meadow; it is flat on either side of the river and certainly in the May 1720 flood the Frome covered Earls Mead, the opposite side of the river from St Jude's, to a depth of several feet (Latimer 1893: 125). A similar flood in October 1882 submerged this same area, now housed, again to a depth of several feet, extending along Newfoundland Rd and St and as far as St Paul St at Portland Sq (Latimer 1887: 520-2).

By the fourth edition of Millerd's plan, however, ascribed to ca.1710 but in view of its depiction of Wade's bridge presumably at least as late as 1711 (see above), a considerable build-up is depicted in the south and SW part of the area (FIG 173). The obviously subsequent nature of the additions to the plan together with Millerd's basic lack of detailed accuracy - for although at the large scale of ca.24-1/2 ins to the mile it is done in the bird's-eye view tradition - make definite interpretation difficult; but buildings appear to cover the NW side of Lamb St as far as the line of Wade St, both sides of New St about as far as the line of Gt George St (what appears to be two round haystacks here probably indicate a farm here also, however), and Gt Ann St as far as Pinnel St (a street parallel to Wade St but nearer New St and joining Gt Ann St to Pointz Pool - see below), with some development on the banks of the Frome. Although Wade's bridge is shown and the modern Houlton St running from the bridge to the NW across Earls Mead also appears, Wade St is depicted only by two parallel dotted lines superimposed on the Latin inscription; it is possible, however (see below), that this vagueness is occasioned by the makeshift nature of the additions to the plan particularly where an item (in this case the inscription) was already occupying the space.

Logically, New St should be the earliest part of the development in view of its name, and its positioning - clearly designed to be directly adjacent to the city boundary - would also suggest it to be the natural place to begin to lay out the area. The position of the Friends' Workhouse at the head of New St makes it difficult to believe New St could have been constructed before the workhouse, and would suggest the street was either originally built to serve it or else laid out subsequent to its construction; a terminus post quem would therefore be the construction of the workhouse, which was 1696-98 (Latimer 1900: 485; cf Raistrick 1950: 85-6, 1968 ed; Mortimer 1967: 18 and 1971: xiv). As Latimer notes elsewhere (1893: 92), Wade's bridge over the Frome was constructed in 1711 to give access to the development, so that opening up of the area must have started by then; in fact the brief perusal of the area's property deeds indicates occupation starting several years before 1711. The property latterly known as 21-22 Lamb St, for example, for which there are documents covering the period 1708-1931 (BAO 4627 (594)a-D), is noted in the earliest deed as having been granted by Wade to a Bristol carpenter James Baugh on 6 February of the fifth year of queen Anne - 1706/7 - while in the deed for a property apparently at the corner of Wade and Lamb Sts dated 6 March 1707/8 (BAO 12779(2)) there is a reference to the thoroughfare "lately laid out by Nathaniell Wade of the said Citty [Bristol] and called Wade street". Ann St was in existence by 1715/6, when the property latterly known as number 51 and owned 1810-73 by the George pipemaking family (and after them by the Bristol City Mission - see below) was rented to a tiler Thomas Hallier from Wade, for it is specifically stated the street was laid out, and also that the land between this property and Wade St was "void ground" (BAO 1380(1b),(23),(26)). In the property-deeds the St Jude's area is regularly called "Crotwells or Lamb Ground", suggesting a former owner may have been one Lamb. Lamb St, though the name does not appear on plans until Rocque's of 1742 (FIG 169), presumably takes its name from this; as a road it probably existed in medieval times, being the route to Gloucester - it appears as the "Gloucester Road" on Millerd's various maps.

The first plan to show the area in accurate detail is Rocque's of 1742, done to a scale of 26 ins to the mile (FIG 158). This appears to indicate the entire area was built up with the exception of about half of the NW side of Little George St, though as noted earlier the names "George's Street" and "Ann's Street" are not extended beyond Wade St which might suggest the area NE of Wade St had either not yet been developed or was only in the process of development. Certainly blocks of building are clearly shown on the NE side of Wade St nearest Traitor's Bridge and turning the corner to extend partway up the NW side of Little George St, and blocks of buildings are also shown in the NE side of Eugene St, which suggest the area was well on its way to being completely built up. There can be no doubt the area SW of Wade St was thoroughly developed by 1742, for already courts and alleys have been laid out to provide access to the rear of various properties, doubtless to service additional houses built where back-gardens had been. This in itself suggests St Jude's was becoming a densely-populated working-class area with all the makings of a slum (cf 4: VI).

Pinnel St, noted above as running parallel to Wade St and joining Gt Ann St to Pointz Pool and possibly appearing on Millerd's ca.1710 plan, was one such alley. At its Pointz Pool end, Rocque in 1742 (FIG 165) depicts what appears to be steps, or some similar barrier, suggesting through traffic was limited. Ashmead in 1828 (FIG 168) shows this end to have a definite constriction, indicating passage was probably restricted to foot-traffic; and the 1883, 1903, and 1952 OS plans (FIGS 174, 175, and 176) indicate there was a covered passage at this point. A sketch of 1907 looking down Pinnel St to Gt Ann St from Pointz Pool (FIG 177) reveals this entry to have been a flat-roofed passageway with iron bollards blocking vehicular traffic; fruit or vegetables are being sold by a vendor at the entrance to the passageway, and Pinnel St is seen to comprise largely two rows of three-storey houses, as is also Gt Ann St in the background

(Stone 1909: 259 lower illus.). Above the Pinnel St archway a window is shown, indicating housing extended over the passage: this means of providing extra room and thus extra rent is commented upon in Leeds slums (Beresford 1971: 107). Rocque also indicates a cul-de-sac running off Pinnel St towards New St and called Holland Ct, clearly indicating the built-up nature of the New St-Gt Ann St-Pinnel St-Pointz Pool block.

By Ashmead's time a regular network of passages and alleys has developed within this block, one leading on to Gt Ann St and another to New St. The name Holland Ct has gone, and in its place have appeared Pinnel's Ct - the entrance off Pinnel St - and Gaye's Ct - a block of buildings in the centre of the area. By 1883 (FIG 174) names have changed again, Pinnel Ct now being the name given to a court opening off the opposite side of Pinnel St, a court marked but not named by Ashmead in 1828. A block of buildings on the SW side of Ashmead's Pinnel's Ct is now called Burge's Place - there is apparently no name for the actual passageway - and Gaye's Ct on Ashmead's plan has become Burge's Ct, though it would appear by 1883 Burge's Ct had been walled off from entry past Burge's Place and that the only entrance to the former was now from New St. The 1883 OS plan shows at large scale just how complex a set of passages, dwellings, and commercial buildings (for example, a malthouse behind the "Dolphin" on New St) had developed in this warren. Finally, in the 1950s clearance and rebuilding removed Pinnel St entirely together with the part of Gt Ann St running SW from it to New St, erecting the large multi-storey blocks of corporation flats called Charleton House and Langton House on the line of Pinnel St and the site of Burge's Ct repectively and leaving the surrounding area open (FIG 178).

A lane similar to Pinnel St but allowing unimpeded thoughfare joined Gt Ann and Gt George Sts a little to the NE of Pinnel St's junction with Gt George St: this is called Steer's Lane by Rocque in 1742 (FIG 169) and Ayres Lane by Ashmead in 1828 (FIG 168); and as Eyer's Lane it still exists, though it has been entirely opened out (FIGS 166-67). It is indicated, but not named, on Donne's 1773 map (FIG 159). Rocque indicates no courts off this lane, but Ashmead indicates an unnamed one on the SW side by 1828 and it is depicted in detail, though again unnamed, on the 1883 OS plan (FIG 170).

Off Gt George St, Rocque in 1742 (FIG 169) indicates one through lane similar to Pinnel St and Eyer's Lane connecting Gt George St with what at least by Ashmead's time (FIG 168) was called River St, and also two cul-de-sacs, both on the NW side of Gt George St. The through lane is called Tanners Lane by Rocque (an indication of one of the industries of the area, as noted later) but by 1828 Ashmead shows it as Bull Lane, under which name it still exists (FIG 180-81). It is marked, but unfortunately not named by Donne, in 1773 (FIG 170). Already by Ashmead's time its length on both sides was occupied almost wholly with industrial premises, in which state it remained until mostly cleared in the 1960s. The two cul-de-sacs Rocque names as Bull Ct (opposite Eyer's Lane) and - half-way between Bull Ct and New St - Lancashire Ct. Both are indicated by Donne, but neither is named. Bull Ct is shown but not named by Ashmead but by this time may have been a yard for the factory premises behind and extending to Bull Lane; the

1883 OS plan (FIG 174) shows it, also unnamed, and suggests it probably was connected with the factory. It is indicated on the 1903 OS plan (FIG 175), but by 1952 (FIG 176) had either gone or been roofed over as part of the factory.

Ashmead shows two courts where Rocque has Lancashire Ct: Lancashire Ct appears to be Graces Ct and immediately to its NE (i.e. towards Bull Ct - if it was still so called in Ashmead's time) is Mais Ct. As Grace's Ct and Maye's Ct they are depicted in 1883 as typical St Jude's cul-de-sacs, lined with dwellings, and they are still there in 1903: what appears to be their site is indicated on the 1952 and 1963 OS plans (FIGS 176 and 178) though now surrounded by, and perhaps part of, the ever-encroaching factory to the NE. A photograph of Grace's Ct (FIG 182) appears in an article of 1903 (Anonymous 1903: 450); it shows three-storey dwellings on the NE side and an apparently blank wall at the end which must be the back of the blue factory.

Rocque also indicates in 1742, though he does not name, a cul-de-sac on the SE side of Gt Ann St rather more towards Wade St than Pinnel St (FIG 169). Donne also shows this in 1773 (FIG 170), but indicates no details. Ashmead marks two alleys in this area in 1828 (FIG 168) and they appear on the 1883 OS plan (FIG 174), but neither has a name on either plan. In fact, the remnants of these alleys appear to be depicted on the 1972 OS plan (FIG 176). From the 1883 plan they appear to lead to yards behind Gt Ann St properties.

By 1742 the present Houlton St, the extension of the line of Wade St beyond Frome (or Traitor's) Bridge[89] marked on Millerd's ca.1710 plan, had also been developed across the open meadows on Earls Mead, its SW side being depicted as entirely occupied by buildings and gardens though its NE side was open except for the corner adjacent to the bridge. Rocque in 1742 (FIG 158) calls this street Newfoundland Lane, a name which he also confusingly gives to the thoroughfare which it joins at the opposite end from the bridge, the present Newfoundland Rd-Newfoundland St. Donne's depiction of this area shows no substantial changes by 1773, but the name Holton [sic] St has appeared; Sketchley's Bristol Directory... of 1775 lists a pipemaker on "Holton" St. This area, like St Jude's, lay immediately outside the city limits; in fact Rocque depicts the city boundary, having come up the NW bank of the Frome from the New St area, as cutting through the back of the properties on the SW side of Houlton St much like it does at the rear of the New St properties, but Donne (FIG 170), Ashmead (FIG 168), and the 1883 OS plan (FIG 174) all indicate the boundary followed the back line of the Houlton St properties, suggesting Rocque was probably inaccurate here.

Why Wade built his bridge across the Frome to allow the extension of the line of Wade St is uncertain. It is logical enough that he would want to avoid the more or less central NW-SE cross-road for his development becoming a dead end, but the bridge offered no connections except to the open fields of Earls Mead. Millerd, if he is accurate, indicates the present Newfoundland St (Newfoundland Lane on his plans) did not extend as far as the line of Houlton St in 1673 (FIG 172) and was only housed about as far as the present line of Pritchard St-Stratton St - where Newfoundland St now begins as an extension of Milk St. Neither Rocque in 1742 (FIG 169) nor Donne in 1773 (FIG 170) indicate any development NE of about this line, and even in 1828 Ashmead indicates (FIG 168) development had progressed little beyond Houlton St. Beyond its junction with Houlton St, Newfoundland Lane is described by Donne simply as "Lane to Fields", with the city boundary running along its line, so presumably it offered no through route in that direction; if Houlton St was used for access to St Jude's to any extent it must have been to reach central Bristol by way of Newfoundland St, Milk St, and the Horsefair. Ashmead in 1828 in fact shows the corner of the Houlton St-Newfoundland St junction nearer the city rounded off, suggesting traffic turned predominantly to and from the SW and the city.

At a practical level, access to St Jude's must have always been from Old Market and West Sts. West St, outside the city limits at Lawford's Gate, was built up by 1671 to judge by Millerd's map of that date - his "London Road" (FIG 171) - and his plan of ca.1710 (FIG 172) shows what appears to be a very inaccurate representation of the present Bragg's Lane or at any rate that part of it lying between Gloucester Lane and West St, suggesting this area was being developed at this time. The area between Lamb and West Sts certainly appears to be solidly developed as far as the farther side of Brick St by Rocque's time, with further development along the road to London and Bath, and Donne indicates this as well (both mark Bragg's Lane, though only its farther end is named, being called Lime Kiln Lane). Development along the Gloucester road, however, does not seem to have started beyond Pennywell Lane even by 1773 (FIG 170), though it had by 1828 (FIG 168). Essentially, all roads leading into or out of St Jude's connected either with Pennywell Lane (Eugene St), Lamb St (Wade St), or Pointz Pool (Pinnel and New Sts); and the natural route into the city would have been through Pointz Pool and Bull Paunch Lane to Old Market St. The only other access to St Jude's was by the alley called Teague's Ct which Rocque depicts linking New St opposite Gt Ann St with Redcross St; this connection is also depicted in 1773 and - in a convoluted version - in 1828. This relative lack of access to St. Jude's and its position between a main route past the area on its SE and a river on its NW with only one road-bridge crossing it must certainly have contributed to the isolation of the area from the mainstream of city development. Dead ends and backwaters, reinforced by factors such as malodorous factories or open sewers, made for slums far more than did age of houses (Dyos 1967: 25; Dyos and Reeder 1973: 364). By 1883 (FIG 174) demolition had cleared the south end of the SW side of New St; by 1903 (FIG 175) Gt Ann St had been extended to meet a new thoroughfare, St Matthias Park, opened 1887, which had been cut through slum tenements SW of New St to give traffic from Narrow Weir access to Lamb St and beyond. However, even today the nature of its layout gives St Jude's little access save to the SE, emphasizing its isolation between New St, the Frome, and Eugene St.

Ashmead's plan of 1828 (FIG 168) is the first to show details of individual properties, and the heavily built-up nature of the area, the appearance of dwellings where back-gardens had been and of courts and alleys to serve them, the erection of industrial premises - all signs of slum or semi-slum development - are all indicated. It is particularly interesting to compare Ashmead's survey with the 1903 OS plan (FIG 175) at the same scale, for one can see how much prolification of slum dwellings in back-gardens had taken place in 75 years. In 1828 signs of this development appear in all the St Jude's blocks, but only that defined by New, Gt Ann, Wade, and Lamb Sts is depicted as heavily covered by such occupation; by 1903 not only has this block become an almost solid sea of courts and alleys but the same degree of concentration has spread over the whole area with the exception of the NE part of the Wade St-Little George St-Eugene St-Little Ann St block, where a few properties are still depicted as having most or even all their original back-garden area. St Jude's, to use T.H. Smith's neat phrase describing the Nichol in Bethnal Green, "prolificated within itself", housing being built in the yards of other houses and courts being fitted into vacant spaces, gardens, and between built-up areas (T.H. Smith 1959: 41; cf Bezodis *et al.* 1957: 5; Dyos 1961: 109-13; and Mole 1973: 818; for similar developments in other centres see Chapman and Bartlett 1971: 223-6; Chapman 1971: 140; Beresford 1971: *passim*; Ward 1962: *passim*; Treble 1971: *passim* and for a classic case of the decline of an aristocratic area to one of lower working-class with consequent infilling of courtyards and gardens see Sorlin 1972, esp. cf map of 1763 on p.84 and that on p.86 showing the same 450-acre area of the Marais district in Paris before present restoration commenced).

Some idea of the density of occupation can be had from examining the 1883 plan (FIG 174) and listing the number of named courts, lanes, or roads serving dwelling-areas behind the main thoroughfares of the area. Those named are as follows:

Lamb St, NW side, between New and Wade Sts:
Pinnel St (see above)
Harris Ct (called Taylor's Court by Ashmead)
Whipperton Ct (shown but not named by Ashmead)
Crocker's Ct (shown but not named by Ashmead)
Gt Ann St, SE side:
Pinnel St (see above)
Gabriel's Ct (shown but not named by Ashmead)
Baker's Ct (shown but not named by Ashmead)
Gt Ann St, NW side:
Eyer's Lane (see above)
Broad's Ct (shown but not named by Ashmead)
Cotton's Ct (shown but not named by Ashmead)
Little Ann St, NW side:
Pratten's Ct (shown and named thus by Ashmead)
Swan Ct (a very narrow alley running through to Little George St; shown but not named by Ashmead)
Gt George St, SE side:
Bolton Ct (called Gulifers Ct by Ashmead, at which time it also connected with Wade St)
Gt George St NW side:
Grace's Ct (see above)
Maye's Ct (see above)
Bull Lane (see above)
Little George St, NW side:
George's Court (shown but not named by Ashmead)
New St, NE side, between Lamb and Gt Ann Sts:
Burge's Ct (called Gaye's Ct by Ashmead, at which time it also connected with Pinnel and Gt Ann Sts)

New St, extreme NW end, curving round school on site of the Friends' Workhouse:
River Ct (shown and named thus by Ashmead)
Wade St, SW side, between River and Gt George St:
Milsom Ct (shown but not named by Ashmead)
Wade St, NE side, between Little Ann and Lamb Sts:
Arnold's Ct (marked but not named by Ashmead)
Eugene St, NE side:
Allen Ct (called Dolman's Court by Ashmead)
a large but unnamed cul-de-sac between allen Ct and Pennywell Rd (shown but not named by Ashmead; still in existence - FIGS 185-86 - but no name known)[90]

These are (with the exception of the last) only named courts: there are many more indicated on the 1883 plan with no name, and while many of these probably served commercial yards or similar open spaces some certainly served dwellings - for example, two on the NW side of Little Ann St one of which is Ashmead's Porter Ct (FIG 168).

All the courts and lanes recorded in 1883 (FIG 174) also appear in 1828 on Ashmead's plan (FIG 168), indicating the area had been committed to high-density occupation already by the early C19. As noted above, Matthews in 1794 was already speaking of it as "that populous suburb". This bears out the impression noted above from Rocque's plan, that from early in the life of the St Jude's development and perhaps from its inception the area was designed for the poorer classes.

Not surprisingly, outbreaks of fever were recorded in 1832 in the Lamb St-Bragge's Lane area and in Wade St; and outbreaks of cholera in Lamb St, New St, and the area of tenements between New St and Redcross St just across the city boundary (De La Beche and Playfair 1845: map; map also catalogued separately by Bristol Public Libraries as B.1483). In 1831 many victims of Indian cholera were buried in St Philip and Jacob churchyard (Latimer 1887: 186-7). In 1845 it was recorded that much of the sewage from St Paul Out-parish (the area across the Frome from St Jude's and St Philip and Jacob Out-parish) appeared to run into a tributary of the Frome at Baptist Mills and that "A large portion of the sewerage in the out-parish of St Philip and Jacob is in a miserable state...." (De La Beche and Playfair 1845: 250). At least in mid-century the city scavengers apparently did not have to clean the pavements, and as courts were considered pavements as opposed to roads, the scavengers did not enter them, forcing the inhabitants, if they wanted sufficiently to have refuse and ashes collected, to take them to the street (De La Beche and Playfair op. cit. 249-50). This only aggravated the already unhealthy state of courts and cul-de-sacs with their lack of fresh air (cf Treble 1971: 176). Further, according to De La Beche and Playfair (ibid. 256), few if any large towns in England had as inadequate a supply of water as did Bristol - De La Beche and Playfair give no details, but immediately prior to the time they were writing, in the early 1840s, Liverpool's water-supply was so poor that water was made available to the general population only on alternate days for periods of 1 to 2-1/2 hrs (Treble 1971: 186).

Population density figures and mortality rates are unfortunately not readily available for St Jude's, but the number of one-room abodes noted by observers of the area in the mid- and later C19 (see below) leave no doubt that density must have been comparable to that recorded for parts of East London in the second half of the century (4: VI) and no doubt mortality was of the same order. The Nichol area of Bethnal Green with examples of 90 people in 10 rooms and an 1889 mortality rate of 4% (T.H. Smith 1959: 41) cannot have been much worse than the worst Bristol slums, for De La Beche and Playfair note that in the 1840s Bristol as a whole had an average of 6.1 persons to a house with frequent occurrences of families of five and six occupying a single room and an average mortality rate of ca.3%, third only to Liverpool and Manchester (De La Beche and Playfair 1845: 258, 260). Further, estimates in 1842 gave the average age of death for the labouring classes in Manchester, Bethnal Green, and Liverpool as 15, 16, and 17 years respectively, appreciably less than half the averages given for the gentry in these same places and also half that for the labouring class in rural Rutlandshire (E.P. Thompson 1963: 365, 1968 ed; see also p. 372 above); while in the Potteries, a singularly squalid slum in the Notting Dale area of northern Kensington in London, the average life expectancy in the period 1846-48 was as low as 11 years 7 months, 80% of the deaths recorded there for this period being of children 15 years old and younger (Malcolmson 1970: 77-8, 177 table 6). In 1871 the average death rate for a number of Potteries' streets was 3.64%, while as late as 1896 in what was called the Notting Dale Special Area - the streets immediatley south of the original Potteries - the death rate was no less than 5.0%, nearly half the children in Notting Dale during the years 1896-98 dying before their first birthday (Malcolmson 1970: 81-3, 179 table 8, 180 table 9). All this would lead one to conclude that the average age at death for the Bristol labouring class in the mid-C19 would have been only a little higher than the 17 years figure for Liverpool and the figure for St Jude's not greatly higher than the 11 years 7 months figure for the Potteries and that the St Jude's figure might not have improved by the end of the century.

Unfortunately no plan prior to Ashmead's indicates individual properties so that it is not known when the industrialization of the area begins, but the River St frontage is certainly predominantly factories by 1828 (FIG 168); Ashmead indicates several large buildings though only one - a glue factory midway between Bull Lane and Wade St - is identified as to product. The 1883 OS plan (FIG 174) indicates this property had remained in that line for much of the C19, for it is called there a gum works, though it is indicated by this time it was disused. By 1903 (FIG 175) it was a brewery, but by 1952 (FIG 176) considerable changes had occurred in the area and the use of this particular property is not given; in 1963 (FIG 178) it appears that the factory immediately to the SW had taken over some of the property, the remainder being described obscurely as a "Works".

The factory immediately SW of this property occupied the rest of this front as far as Bull Lane. It is clearly shown by Ashmead (FIG 168) though not named; in 1883 (FIG 174) it was an oil and colour store. It is indicated but not identified in 1903 (FIG 175); by 1952 it was called simply a "factory" (FIG 165) and in 1963 was referred to as a warehouse (FIG 178). By 1969 the premises had been levelled (FIG 180).

On the opposite - SW - side of Bull Lane, Ashmead indicates a large building running all the way back from River St to the houses on Gt George St and occupying a considerable amount of the NE end of this block. In 1883 (FIG 174) this property is identified as an oil and colour works and was still in the same business 70 years later, the 1952 OS plan (FIG 176) noting it was a paint and varnish works. In 1963 (FIG 178) it was called non-commitally a "Works"; it had been demolished by 1969 (FIG 180). Between 1903 and 1952 the premises expanded back to Gt George St and may also have taken over the blue factory to the SW on River St (see below) - there is some uncertainty on this latter point for while the 1952 OS plan would indicate this, the larger 1963 OS plan suggests the two factories, while both expanded from their 1903 extent (FIG 175), had remained independent.

The site of the blue works is indicated by Ashmead as an irregular hollow structure, or series of contiguous structures, fronting River St immediately SW of the 1883 oil and colour works and backed by Grace's and Maye's Cts coming off Gt George St. Its use in 1828 is uncertain, though there is some indirect evidence involving pipemakers (see below) that it may have been a sugar factory; by 1883 as indicated above it was a blue works. Its use in the 1950s and 1960s is uncertain, for while the 1952 OS plan includes it under the paint and varnish works to its NE, the 1963 OS plan indicates two separate contiguous properties, that where the blue works had been being called a "Works" as was its neighbour to the NE (see above). In any event, the blue works property, like its paint and varnish works neighbour, had expanded after 1903, for before 1952 it had enclosed, possibly as a loading yard, the site of Grace's and Maye's Cts.

The possibility mentioned above that the blue works had been a sugar factory is based on a rather involved extrapolation from an obscure reference to a pipemaker sometime in the second half of the C19, but nevertheless seems plausible. Thomas George IV, the last Bristol pipemaker, made in 1952 and 1953 two lists of pipemakers based on his recollections and covering most of the second half of the C19 (see also Section VI above); and in one of these lists an E. Carey appears with the address given as Blue Factory, Gt George St (the other list has a David Cox at the same address). Carey is unknown from any other source, but could have been a member of a well-known Bristol pipemaking family of that name who flourished in the later C18 and earlier C19. One of this family, Israel Carey II (fl 1811-29), worked in the St Jude's area 1812-26; and a series of addresses for him in the trade directories between 1815 and 1822, though obscure, suggest he had property between River and Gt George Sts in the area of the later blue works. The entries are as follows:

1815, 1817:	Gt George St - Counter, 4 River St, Ropewalk
1818:	Sugar House, Gt George St - Counter, 4 River St, Ropewalk
1819:	Sugar House, Gt George St
1820-21:	Gt George St (Counting House, Sugar House)
1822:	Counting House, Sugar House, Gt George St

What "Counter" and "Counting House" refer to here is uncertain: the OED (vol II) gives as an obsolete meaning of the former "counting-house", noting 1809 as the latest recorded use of the word in that sense, and possibly it means here a sales office (cf Stiles 1970: 12 for a reference to a counting-house for the Old Market St sugar-refinery which was a sales office in central Bristol). If 4 River St was at the SW end of the street it must have been very near the 1883 blue works, and the association of the address with the "Ropewalk" tends to bear this out, for although the need to add yet another location in the address is not obvious, the reference must be to the area directly across the Frome from River St, where Millerd ca.1710 (FIG 173) and Rocque in 1742 (FIG 169) both note rope-walks. This area is not yet developed on Ashmead's 1828 plan (FIG 168), so may still have had a rope-walk although not marked as such; by 1883, when the area had been entirely housed, what is now the SW end of Wellington Rd (at that time the SW end of Skinner St - Wellington Rd then only came as far SW as Frome Bridge; see also 1903 OS plan - FIG 175) was called Rope Walk, suggesting the area may have remained a rope-walk until built over. In any event, the reference in Carey's addresses agrees with a factory near the SW end of River St. Taking the addresses at their face value, Israel Carey made pipes at a premises which included some sort of office and a sugar-factory. If E. Carey was a descendant and worked in the same premises then the blue works at which he is recorded is presumably the sugar-factory in 1818-22.

A "Sugar House" is recorded on Gt George St at least as early as 1812, when the Matthews's directory for that year notes a Thos Phillips and Co at that address; and the identification of there premises with the later blue factory is made almost certain by a firm of Mais and Thomas being noted in Matthews's 1803, 1805, and 1806 directories as "sugar refiners" on Gt George St, for the Mais of this firm must surely be connected with Mais Ct noted by Ashmead in 1828 which (as Maye's Ct) lay directly behind the blue factory in 1883 (see above). Despite the premises on both Ashmead's and the 1883 OS plan being definitely on River St - the latter plan clearly shows a vehicle entryway from the road across the pavement - the address of both Careys, Phillips and Co, and Mais and Thomas all indicate a connection with Gt George St; the only possibility from the very large scale 1883 plan is that there was an entry from Grace's Ct or - more likely as FIG 182 suggests Grace's Ct ended at least ca.1903 in a blank wall - Maye's Ct, both of which ran off Gt George St (see above).

As noted above, River St never extended NE of Wade St, Rocque in 1742 (FIG 169) and Donne in 1773 (FIG 170) indicating much of the area between Little George St and the Frome as open land. By 1828, however, Ashmead shows this area entirely built up, with a short cul-de-sac of houses continuing the line of River St and lying in front of a property of unspecified use, then a large turpentine works immediately NE of that extending as far as the line of Eugene St, and NE of that again with access from the junction of Eugene and Little Ann Sts a tanyard. By 1883 the property adjacent to the bridge was a tannery, the turpentine works was another oil and colour works, and the tanyard was still there. By 1952 the tannery at Frome Bridge had become a marble and mosaic works and the other tannery beyond Eugene St a mill (actually a sawmill); the oil and colour works was still in the same basic line it had been in since Ashmead's time, being now an oil and chemical works. (The tannery at Frome Bridge was still in operation at the beginning of the C20, for in 1903 the Corporation, having decided to build opposite the tannery the hostel at the corner of Wade and River Sts now the Salvation Army Hostel (FIGS 187-88), paid Thomas Griffiths the tannery owner £50 as recompence for any loss (not admitted) of light or air as a result of a higher building being erected opposite (BAO

113231(1) - one of the St Jude's property-deeds noted earlier). By 1963 the mill was still there, but the Frome Bridge tannery and the oil and chemical works had become "Depots", a term which on St Jude's maps tends to mean "dump". In 1971 there was a haulage contractor's business on part of the oil and chemical works site, the rest of the area being largely cleared (FIG 174, taken in 1969, shows the desolation viewed SW along Little George St with Wade St in the distance).

Apart from River St, large-scale industrialization has not appeared in St Jude's by the time of Ashmead's 1828 plan (FIG 168); the only other place where a large warehouse-like structure is indicated is the NE end of the block bounded by Eugene, Little Ann, and Wade Sts and Pennywell Lane (now Rd). No identification is given by Ashmead, but in 1883 (FIG 174) it is a malthouse and it is still this in 1952 (FIG 176) - in 1963 it was labelled "Works" (FIG 178). By 1883 there was a large lard refinery NE of Harris Ct on Lamb St but the essentially domestic layout of the St Jude's properties indicated by Ashmead and presumably dating from the initial development of the area a century earlier is still obvious, just as it is in 1903 (FIG 175). By 1952 the lard factory had become a warehouse and extended to cover Harris Ct and other properties; by 1962 it had been cleared and the site occupied by parts of Haviland House and John Cozens House, two of the multi-storey council flats in the area. The property now 14-15 Lawfords Gate (earlier 14-15 Gloucester Rd), which had first been leased in 1706/7 (BAO 24239(9)), included a hat factory established 1856 (loc. cit.) which subsequently became a jam, pickle, and vinegar factory - doubtless offering employment to the local Lizerunts - and continued in this line until at least 1952, when the OS plan of that year labels it a jam and pickle factory and shows it extending across the block to Little Ann St. By 1963 it is a warehouse and the property behind (on Little Ann St) a depot. Between 1903 and 1952 property immediately NE became a warehouse also extending across the block from Pennywell Rd to Little Ann St, and by 1963 the space on Little Ann St between these premises and the malthouse at the NE of the block noted above had also become a warehouse, making over half the block solid industrial property. This progressive industrialization of the area is very marked by 1952, when the OS plan of that date can be compared with the OS plan of 1903 and Ashmead's of 1828 both at the same scale; and it is emphasized, and no doubt also increased, by most of the domestic structures having been by that time swept away.

A study of a selection of the larger-scale plans showing the St Jude's area, therefore, suggests the area was developed from its beginnings in the first decade of the C18 as one for working-class housing: the convenience of an area contiguous to the city boundary but lying outside the city and its controls must have been obvious to enterprising craftsmen and tradesmen in the C18 impatient with the reactionary efforts of city guilds to control their occupations (see Section II(d) above), and this may well have been a reason for the original development of the area. Already by 1752, on the evidence of Rocque's plan of that year, high-density occupation in the form of lanes and cul-de-sacs within the major blocks was occurring at least in the part SW of Wade St and particularly in the Pinnel St area.[91] By 1828, on the evidence of Ashmead's plan, this feature was very marked, and by 1883, on the evidence of the very large scale OS plan of that date, occupation was approaching saturation point. (There are no figures available for the population of St Jude's, but census figures for the out-parish of St Philip and Jacob from 1801 onwards show a rise from 8,400 in 1801 to 50,000 in 1881, the population doubling between 1801 and 1831 and between 1831 and 1861 (Latimer 1887: passim).)

The lack of major industrial premises in the area in the C19 other than along River St and in the area between the Frome and Little George St would suggest the inhabitants either worked outside the area or were involved in domestic or semi-domestic industries within the community, and an examination of the trade directories for the years on either side of 1800 (the first directory appears in 1775 and they become regular from 1793 on) confirms the latter suggestion. A random list of trades appearing in St Jude's includes the following:

New St - pin-manufacturer, pumpmaker, carpenter, bellowsmaker, bookseller, sergemaker, butcher, baker, coffin-maker, excise-officer;
Lamb St - cooper, shoemaker, tiler and plasterer, confectioner, baker, clothmaker;
Gt Ann St - pawnbroker, maltster, shoemaker, patten-maker, mason, plaster-of-paris manufacturer, millwright, excise officer;
Gt George St - pawnbroker, tiler and plasterer, coach-plater, Bristol Subscription Brewery;
Wade St - hog-butcher, tailor, smith, brassfounder, rug-maker, painter;
Little Ann St - baker, currier, sergemaker;
Little George St - woollen-manufacturer, tobacconist, turpentine manufacturing company (noted 1805, prob. the "turpentine works" of Ashmead noted above);
Eugene St - hooper, tanner, undertaker, carpenter and joiner.

These occupations are typically those of poorer independent artisans and craftsmen who could do business from their home or backyard, plus provisioning trades typical of a populous community.

If any one industry was pre-eminent in St Jude's from before 1800 it appears to have been the leather trade; as noted above, there were tanneries in the area until at least the beginning of the C20. An anonymous publication of 1875 noted that "A hundred years ago Bristol leather was the best on the market" but that with the appearance of adulterated goods it declined; however, "within the past thirty years" standards had been raised and Bristol was now the largest leather producer in the country with quality as good as any (Anonymous 1875: 220; cf Latimer 1887: 309). St Jude's is not mentioned, but Sketchley's 1775 directory notes a tanner on Eugene St, indicating leather workers already in the area about the time the industry was at its height in Bristol. This is probably the tannery between Eugene St and the Frome which existed throughout the C19 (see above), and as neither Rocque in 1742 (FIG 169) nor Donne in 1773 (FIG 170) show any development in this area it appears tanners must have moved into at least this part of St Jude's only in the 1770s - indeed, the arrival of leatherworkers in St Jude's may have been associated with the decline in the industry from this period indicated above. Certainly by ca.1800 there were in St Jude's not only tanners but those in associated trades such as curriers, butchers, and glue-makers. By Ashmead's time, 1828, there was a tannery on the opposite side of Frome Bridge (FIG 168), on the SW side of Houlton St. As noted above, the SW side of Houlton St had been developed by 1742 (Rocque's plan) but neither Rocque nor Donne indicate an industry; Ashmead shows a different layout of buildings frome Donne. (By 1883 (FIG 174) the area was entirely housed as Frome St and part of Skinner St, a name probably connected with the leather trade and given to what is now Wellington Rd SW of Frome Bridge (see also FIG 175, the 1903 OS plan).)

Further evidence of the industry is the "Jolly Tanners", a tavern on Gt George St from at least 1794 until the 1910s, the "Jolly Skinners", a similar establishment on Wade St also in existence by 1794 and continuing until the early 1870s; and the names Skinner St, Tanners Lane (now Bull Lane), and probably Steer's Lane (now Eyer's Lane) and both the present and former Bull Lanes. The concentration of leather-workers in St Jude's was probably because it was a malodorous industry unsuitable for more central areas and it needed a convenient source of water which it had in the Frome. Campbell (1747: 216-7, 1969 ed), describing the tanning process, noted it "is generally performed in the Country" and observed that leather-dressing was "a nauseous dirty Business through all its Branches". Fishing, swimming, walking one's sweetheart along the banks, and the other pleasures of the Frome extolled by Millerd's dactylic hexameters must have disappeared very rapidly after the first tanner appeared on the scene.[92]

The inferior social position of St Jude's reinforced, one might almost say symbolized, by its having poorhouses at its SW and NE edges and a prison adjacent to the latter area. As early as 1696 the five central Bristol parishes had been ordered to give three months' contributions towards St Philip and Jacob's poor-rates because of poverty there (Latimer 1900: 486). In this same year the Society of Friends decided to establish a workhouse "for the Willing Friends to worke in & the Aged & Feeble to live in" which was opened in 1698, as noted above, on New St (Mortimer 1967: 18). Weavers in particular were in distress among the Friends, and this may have been a reason for the workhouse being built in St Jude's, for as mentioned earlier, Latimer (1893: 3) noted weavers among the inhabitants of the suburb beyond Lawford's Gate at the beginning of the C18. According to Mayo (1966: 110-3, cf 350), Bristol Friends gave money in 1688 to the Huguenot refugees newly settled in Bristol, about half of whom had settled outside Lawford's Gate. In October 1728 ca.500 weavers from beyond Lawford's Gate burnt 30 looms there and set off on an extensive and destructive tour of Chew Magna, Pensford, and Keynsham, destroying machinery and pulling down a house; and in the following September there was again loom-burning and rioting, with several deaths and an execution. There was continued loom- and cloth-burning, and executions, in subsequent years, the cause of unrest being apparently lowering of wages by employers at a time when weavers were already starving (Latimer 1893: 166-8; cf 81, 209, 236). By the end of the C18, however, directory entries suggest the cloth industry was no longer important in the eastern suburbs (cf Latimer 1893: 515). (George Berry apprenticed a pipemaker in 1740 is recorded as the son of weaver William Berry of the out-parish, while James Bond A 1734 was the son of dyer James Bond and Charles Bosher A 1763 was the son of tailor Leonard Bosher both of the out-parish and with trades related to the cloth industry. Edward Hunt A

1757 and the son of Edward Hunt a Bristol weaver probably also came from the out-parish, for when he was apprenticed his master received £5 from a donation for the poor of out-parish.)

The Friends' Workhouse functioned in its original capacity until ca.1721, though soon after its founding it was taking in boys who were schooled and apprenticed in the weaving trade to make the undertaking viable. Thereafter it became wholly a poorhouse and school for Friends' children (Latimer 1900: 485; Raistrick 1950: 85-7, 1968 ed; Mortimer 1967: 18 and 1971: xiv), though Ashmead in 1828 still labels it "Friends' Work House". It continued as a poorhouse until 1866 when it was adapted for mission-work in the area (Anonymous 1906 ed: 55). Subsequently it became a Board School (Anonymous 1885: 31); the 1883 OS plan (FIG 174) refers to it as a school for boys and infants. It is almost certainly this building which is illustrated in a booklet published ca.1930 by the Bristol Churches Tenements Association (Anonymous n.d.[26]: 8-9) with the headlines "NEW STREET, ST. JUDES, as it appears to-day before alteration" and "THE SCHEME for which we need £7,000 at once" (FIG 190): the scheme was the "extend and remodel...Buildings in New Street...to provide 23 tenement flats" (p.10) and the illustration is apparently that of the property to be converted. The building is not named, but an examination of the photograph suggests it must be the school, though the lamppost shown does not appear on the 1883 OS plan. If it is this building illustrated, presumably the conversion resulted in the present building on the site, known as the New St Flats. What is probably the workhouse - identified from its position vis-a-vis the bridge shown across the Frome which is presumably Quakers' Bridge noted above - appears on the ca.1710 edition of Millerd's plan (FIG 173) as a two-storey-and-an-attic structure with a wing extending SE from either end, but Rocque in 1742 (FIG 169) and Donne in 1773 (FIG 170) both show an H-shaped structure. Ashmead, however, depicts it in 1828 as a central block with two wings extending SE (FIG 168) - the same form as in Millerd's bird's-eye projection. Matthews (1794: 87-8) refers to it as "a handsome edifice". The 1883 and 1903 OS plans (FIGS 174 and 175) indicate the school building was a solid rectangle with an extension SE to New St; the 1952 and 1963 OS plans (FIGS 176 and 178) show the same shape but indicate the rectangle is hollow. Despite their name, the New St Flats have their main entrance on River St.

The other poorhouse was in Pennywell Lane immediately NE of Eugene St. It was built presumably soon after the site had been bought in November 1732 (I am very grateful to the Bristol Archives Office for this information). It is labelled "Poor House" by Rocque in 1742 and Donne in 1773; both depict it as a building with a main block parallel to the road and two short wings running at right angles from either end down to the road. Both plans clearly show it lay on the extreme edge of the built-up area and bordered open countryside throughout the C18; even by Ashmead's time, 1828, the area is by no means wholly built up, though occupation along Pennywell Lane has commenced. Ashmead's depiction of the building, which he labels "St Philip's Work House", does not indicate the wings running down to the road. Matthews in 1794 (pp87-8) described it as "a neat and spacious building" and in the 1819 (fifth) edition of his Guide (p.160) it was observed to be "replete with the poor of that populous parish". In 1835 an Assistant Poor Law Commissioner, noting the workhouse served a parish of nearly 17,000 inhabitants which spent £6,000 annually on poor support, denounced it as "a disgraceful instance of neglect and mismanagement". The building was "filthy in the extreme"; its inmates "dirty and wretched", with men, women, and children huddled indiscriminately together (Latimer 1887: 200 n.). Following the Poor Law Reform Act of 1834 St Philip's became part of the Clifton Union covering northern suburban Bristol and was used for able-bodied paupers. With the opening of a single new poorhouse at Stapleton in 1847 a vestry hall and parochial offices were built on part of the St Philip's site, the rest of which was sold (ibid. 279). In 1880 the present Vestry Hall was erected (FIGS 183, 178-79); from ca.1922 to ca.1957, despite its name, it was a cinema.

A prison to serve the Gloucestershire portion of St Philip and Jacob parish (the out-parish) existed by the first half of the C17, for in 1647 there is a reference to ground "near Lawford's Gate, behind the place where the Cage heretofore stood" (Latimer 1900: 217-8). There continued to be a "cage" near Lawford's Gate until the early C18, for in 1715 it was considered no longer adequate for the increased population of the out-parish and Kingswood, and arrangements were made to rent a small piece of ground in Well Close on which to erect a "Bridewell", which was built shortly afterwards (Latimer 1893: 112). Rocque's plan of 1742 shows it on the SE side of what is now the thoroughfare of Lawfords Gate (earlier Gloucester Rd) immediately NE of its junction with Brick St (FIG 165). In 1774 it was described by Howard as having a dark dungeon ca.12 ft by 7 ft in which those who could not afford to pay for a bed slept. Only the very poor were given a food-allowance, and that of only 2d a day. There were no chimneys and the prisoners never left their rooms (Latimer 1893: 407).

In 1785 another piece of ground in Well Close was given for a new country house of correction in return for the old Bridewell, and the new Bridewell, described in 1787 by Howard as designed by "the ingenious Mr. Blackburn", was opened in 1790 (Latimer 1893: 465-6). Matthews in 1793 (pp48-9) described it as a "spacious strong prison of stone on the Howardian plan" with a front of ca.150 ft and a 20-ft high surrounding wall. It had 70 separate cells, a chapel, and a hall for the justices at the front. A writer in 1826 was more terse and less complimentary, describing it as "a vile doghole, without light or air" (quoted in Latimer 1893: 466). Ashmead, who labels it "Gloucester Prison" in 1828 (FIG 168), shows it immediately NE of the Old Bridewell, which latter appears to have been removed and its site housed over by 1828. In 1831 the new building was stormed and burnt down during the Bristol riots (Latimer 1887: 161).

Rebuilt, it ceased to be a prison ca.1860, though the sessional court continued to meet there (Anonymous 1906 ed: 199). According to Latimer (1887: 509) there was a dispute from 1880 between Bristol and Gloucestershire authorities as to the future of the property which had apparently not been solved when Latimer was writing, though he opined that "its ultimate appropriation to recreative purposes is highly probable". However, it is still called Lawford's Gate House of Remand on the 1903 OS plan (FIG 175); in fact, it was not demolished until 1907 (Winstone 1960: fig 173). Wessex House, one of several Corporation multiple-dwelling units in the area, is on its site (FIG 166).

The religious history of the area is at present obscure. There appears to have been no Anglican church nearer than the parish church, St Philip and Jacob, inside the old city limits, until the erection and consecration 1829-32 of Holy Trinity (corner of present-day Trinity and Clarence Rds, at the west end of West St) after it had been noted 15,000 souls in the out-parish of St Philip and Jacob had no place of worship (Latimer 1887: 130) - the 1831 census in fact gave the population of the out-parish as 15,777 (Latimer 1887: 143). St Jude's, as noted above, was not built and consecrated until 1848-49, its parish being taken from that of Holy Trinity (Anonymous 1906 ed: 84; Latimer 1887: 304). (St Jude's Rectory was established in New St in 1898.) By 1883 there was a Church of England Mission Chapel with seats for 200 in Gt Ann St, on the SE side a few properties down from Wade St (FIG 174); the building was still there in 1952 (marked as "Hall" on OS plan of that year, FIG 176) but had been demolished by 1963 (FIG 178).

The Friends, as noted earlier, had their workhouse in the area by 1698 and apparently had a following among the poor weavers of the area as it was for them in particular that the workhouse was erected. In 1708 the Friends opened a burial ground immediately adjacent to the NE (Mortimer 1967: 15) which remained in use until at least 1883 (FIG 174); it was on this ground that the new Friars Meeting-House was erected after the old Friars property in central Bristol was sold to the Corporation in 1956 (Mortimer loc. cit.). There never appears, however, to have been any Friends' meeting-house in the area prior to this (cf Little 1954: 195-6, 1967 ed; Mortimer 1967: 14-15). Nevertheless, as noted earlier, their Poorhouse continued to serve the area until 1866 when it was adapted to mission work. It subsequently became a Board School (Anonymous 1884: 31), but the Friends' New St Mission, as will be noted in more detail later, opened a ragged school in 1868 and a British Workman in 1874 and was active in local social and religious work. Earlier, in 1865, a Friends' Mission had held a "Thieves' Tea" at Major Tireman's chapel (Unity Chapel) at the corner of Unity St and Midland Rd (in St Philip and Jacob In-parish, south of Old Market St) attended by between 300 and 400 thieves and their accomplices, the police having been persuaded not to enter Unity St until the affair was over (Anonymous 1884: 16). This participation by Bristol Friends in social work is interesting because in general Friends were regarded in the C19 as an exclusive group with few poor among them and little interest in missionizing (Inglis 1963: 13). (Unity Chapel belonged to the Christian Brethren; it became a warehouse ca.1960.)

The earliest reference to a place of worship in the St Jude's area appears to be the "Dissenting Chap. & Burying Ground" indicated by Donne in 1773 on the NE side of Eugene St, opposite the block bounded by Little Ann and Little George Sts. Which branch of nonconformity this represented is unfortunately not clear, for Donne specifically names an Independent, a Moravian, two Presbyterian, two Friends', and three Baptist meeting-houses as well as "Wesleys Room", Whitfield's [sic] tabernacle, and Lady Huntingdon's chapel, which appears to run the gamut of dissenting bodies. Donne also notes a "Dissenters Charity School" in Stoke's Croft which was the combined school and almshouse established by Lewin's Mead Presbyterian (by ca.1775 Unitarian) congregation (Latimer 1893: 134; Little 1954: 186, 1967 ed); the Eugene St chapel may therefore also have been Presbyterian. This writer initially thought the chapel might have been associated, in view of there being at least by 1828 (Ashmead's plan - see below) an adjacent Dolman's Ct with the burial-ground known as Dolman's Yard, with the John Dolman noted by Latimer (1893: 265) as a basketmaker, joint lessee from 1750 of the New Hot Well in the Avon Gorge, and "a preacher at two dissenting chapels". Dolman, however, describes himself on the title-page to his Contemplations amongst St Vincent's Rocks... (1755) as preacher to congregations in "George's-Street" and Guinea St; and if the former is Gt George St, St Jude's and not Gt George St, Park St the chapel in question would presumably be noted below as existing there at the end of the C18 and taken over by the Bristol City Mission in 1826, in which case Dolman's Yard may have been associated with that chapel and not the one on Eugene St adjacent to the graveyard (I am very grateful to Bristol City Libraries for the Dolman reference). Dolman had left Bristol by ca.1760; his religious persuasion is not recorded, but he was apparently sympathetic to John Wesley (Latimer loc. cit.); when he moved to London his congregation was Independent, later expanding to admit Calvinistic Baptists, but in 1765 he became an Anglican (Walter Wilson, The History and Antiquities of Dissenting Churches and Meeting Houses, in London....(1814) vol IV p.343; I am very grateful to Bristol Public Libraries for this reference). A study of the property-deeds for the Eugene St site would probably resolve matters.

Rocque's plan of 1742 indicates this part of the NE side of Eugene St was occupied by that date, for the plan shows a row of buildings, then a gap, then another row of buildings (FIG 169). Donne's plan is too small to show any detail, but it appears to show one block of buildings, the gap noted by Rocque, and then - towards the Little George St end - the chapel set slightly back from the road. The map in Matthews's 1793-94 directory shows the NE side of Eugene St in the same manner as does Donne, but it may well have used Donne as a base. However, it is worth noting that the Matthews's plan does not mark the set-back building as a chapel nor does it note a burial-ground there, though the "Dissenting School" in Stoke's Croft is duly noted: this might suggest the omission of identity for the Eugene St building indicated it had ceased to be a chapel by 1794.

By 1828, Ashmead shows the two rows of buildings, complete with back-gardens, and the gap between them is now a court named Dolman's Ct (FIG 168). There is a graveyard immediately behind the court and the Eugene St buildings which Ashmead calls Dolman's Yard. To its SE it adjoins the poorhouse on Pennywell Lane noted above, to its NW the tanyard noted earlier and open fields, and to its NE is also almost uninterrupted open fields. There is no evidence for any building set back as Donne suggests, nor is any place of worship indicated.

According to Latimer (1893: 355) a private cemetery, the Universal Burial Ground, was opened ca.1762 behind Eugene St because of the increasing population of St Philip and Jacob Out-parish, and charged 4s an interment. This must be Dolman's Yard of 1828, but it must also be the burial-ground of the "Dissenting Chapel" on that spot by 1773 and it is strange this latter affiliation seems otherwise unrecorded. By the beginning of the C19 there were at least four private burial grounds in St Philip and Jacob parish where, according to its vicar, "people bury without ceremony or register": three of these had been opened within the preceding 30 years (Little 1954: 327, 1967 ed).

By 1883 Dolman's Ct had become Allen Ct and the burial-ground was an open yard of unspecified use with considerable building surrounding it. Access to this area was by the large but unnamed court running off Eugene St SE of Allen Ct (FIG 185); Ashmead's plan is ambiguous on this point, but suggests access to the graveyard in 1828 was also by this court. The 1903 OS plan (FIG 175) shows the same layout; by 1952, however, the area had become industrialized, with a refinery occupying most of the Eugene St front and using the erstwhile Allen Ct as its entrance. The 1963 OS plan (FIG 178), at a larger scale than the preceding, identifies a "Works" along the NW side of the unnamed court and another, smaller,"Works" where the entrance to the graveyard appears to have been. These buildings, or parts of them, together with much of the refinery, occupy the burial-ground site. Immediately beyond the end of the unnamed court lies an engineering works which has encroached on a large part of this area; the apparent presence of older houses within this complex (see roofs and chimneys in FIG 185 background) suggest some clues of earlier occupation may yet survive.

Matthews in 1794 (p.80) notes a chapel in "George's St beyond Lawfords-place" which was apparently Wesleyan with an Anglican form of service - it was compared to the Portland St chapel, where the service was "of the Church of England read by preachers of Mr. Wesley's connection"; the latter chapel had been opened in 1792 (Latimer 1893: 498). In the plan accompanying Matthews's 1793-94 directory the chapel is shown on the SE side of Gt George St between New St and Eyer's Lane, opposite Grace's Ct; it may be that referred to by John Dolman in 1755 as one where he preached (p.714 above). By the 1819 edition, Matthews's guide, though still based closely on that of 1794, had omitted this reference from its list of places of worship (pp144-5); but the building must have still been there, for when the Bristol City Mission was formed in 1826 it was reported by W.D. Wills (of the tobacco firm) that he had "engaged the chapel in Great George St at the rent of eight pounds per annum to be paid quarterly" for the mission's work (D.W. Edwards 1927: 13), and this is presumably the chapel referred to above[93] (the Wills family were very active in religious and philanthropic work; both W.D. Wills and his brother H.O. Wills II were strong Congregationalists and founders and officers of several Bristol chapels (Alford 1973: 98-9)). If the Bristol City Mission's obtaining this chapel indicates the Methodists had abandoned using it by 1819, which seems likely, and if the "Dissenting Chapel" in Eugene St had also ceased to function between 1773 and 1828, as also seems likely, this gives some idea of the religious poverty of St Jude's - the area indeed may have had no places of worship at all in the early C19. (There had been considerable Methodist preaching in St Philip and Jacob Out-parish and Kingswood, starting with Whitefield in 1737 and John Wesley in 1739 (Latimer 1893: 200-5, 272-3, 306-7; Little 1954: 196-200, 1967 ed). It would be surprising if there had not been Methodist groups in the St Jude's area; Wesley preached at Baptist Mills, ca.1/2 a mile up the Frome, in 1739; and there was a "society" in Gloucester Lane, running from Lamb St to West St, by that date (Latimer 1893: 203).)

The Bristol City Mission, as noted above, was formed in 1826. Its claim to be the oldest city mission in the country (D.W. Edwards 1927: 12) may well be correct - certainly the London City Mission was not founded until 1835 (Inglis 1963: 305). Its aim was "the diffusion of evangelical religion through the city and its immediate vicinity, by opening houses for reading the scriptures, prayer and occasional preaching" (D.W. Edwards 1927: 18). In view of the fact that even the Salvation Army had not reached the lowest classes and many of its converts were from various Dissenting bodies (Inglis 1963: chapt 5 passim; cf J. Kent 1973: 866-7), it is of interest to note that the BCM claimed never to steal a sheep or a lamb but to go into the wild to bring in the stray and the lost (D.W. Edwards loc. cit.); elsewhere, one of their two stations in Gt Ann St was referred to as being "in the midst of the very population the Bristol City Mission delights to serve" (D.W. Edwards 1927: 20). As the BCM appears to have laboured devotedly and long in St Jude's in the C19 - when it was probably the worst slum in the city - a study of its methods along the lines of Inglis's work might prove interesting; Minute Books for the Mission exist from 1826, though lack of time prevented this writer from examining them. As noted above, the Mission was avowedly evangelical, and of a vigorously fundamentalist persuasion. One of the Mission's most famous evangelists was John Cozens - after whom the Corportion, with rare historical sensitivity, have named John Cozens House, one of their recent multi-storey flats on Lamb St replacing part of the slums in which he worked (FIG 166) - "a man of God, whose heart was aglow with love for his Master and a burning desire for the salvation of man"[94] (Edwards 16); and while the Mission wrestled with the problem of whether drink caused poverty or poverty caused drink their approach appears to have been the "midnight sweep" of the public houses and streets, after one of which "forty-seven pledges were taken and several professed decision for Christ" (Edwards 26).

The Mission had two stations in St Jude's, both on Gt Ann St, one known as East, the other as West. There was a morning service and afternoon Sunday school and bible classes on Sundays, and evening services were conducted both in the stations and in the lodging houses. FIG 192 (taken from Edwards 1927) shows one of the BCM's lodging-house services and probably dates to not long before 1927. Edwards apologizes for the unwonted "Sunday best" clothes of the men, noting they had dressed thus in anticipation of being photographed (cf Inglis 1963: 116). Gt Ann St East held various evening classes Monday to Thursday, and Gt Ann St West had Monday and Friday evening activities and Tuesday and Wednesday afternoon activities. Both stations visited lodging-houses on weekday mornings and the West, where Cozens worked, specialized in services in the lodging-houses, ministering to 12 of them (Edwards 6-7, 21).

Unfortunately, neither mission station is identified on the 1883 OS plan (FIG 174) - confusingly there was an Anglican mission chapel, as noted earlier, on the SE side of Gt Ann St near Wade St which is marked - but by coincidence one of the stations was set up in 1875 in the property (then number 5, later 51) vacated two years earlier by the George pipemaking family when they moved to Gt George St (BAO 13480(26)). FIG 193 (copied from Edwards 1927) shows - top - a large group of children outside one of the Gt Ann St stations (the caption does not identify the view, but parts of

ANN [sic] STREET ST JUDE'S is visible on the two posters in the background); unfortunately virtually nothing of the building shows. The BCM still serves the area today, having erected in 1955 a new building at the north corner of Gt George and New Sts (see FIG 178).

If religion was under-represented in St Jude's, other forms of relief from the miseries of slum life were not. With the commencement in 1700 of the building of Queen Sq, Bristolians lost a recreation area which included their bull-baiting ring (Latimer 1900: 490-1; 1893: 25, 42-3, 45), and as a result the ring was transferred to Pointz Pool (Latimer 1900: 485-6). It remained in use there apparently as late as 1822 and was apparently the last bullring in the city, though at least as late as 1816 there was bullbaiting on Clifton Down (Anonymous 1906 ed: 34; Latimer 1887: 68); St Jude's church was built on the site of the Pointz Pool ring in 1848-49 (Anonymous 1906 ed: 84). Bullbaiting was a popular sport into the C19, for in 1802 the Commons rejected a bill to abolish it and two years later the rector of St John's in Bristol, who was also the City Librarian, presented a paper maintaining that bullbaiting "was not only legal but exceedingly correct and useful to society" (quoted in Latimer loc. cit.). Bullbaiting was made illegal in 1835 (Marshall and Leys 1958: 140, 1963 ed), though as Latimer notes, it still occurred in the South-West at later dates. The area outside Lawford's Gate was known for its "bull paunchers" - bullbaiters - and the lane now replaced by Lawford St is called Bull Paunch Lane by Rocque in 1742 (FIG 169) and by Ashmead in 1826 (FIG 168) (Donne in 1773 (FIG 170) calls it Bull Lane).

Up to 1728 there was also a New Year's Day fair held at Pointz Pool, but in that year it was transferred to nearby West St, also just outside the city limits, where it continued throughout the Georgian era, often with great disorder according to Latimer (1893: 166). A correspondent in the later C19 recalled it being held from Bull Paunch Lane to Gloucester Lane in the early C19 (Latimer 1887: 98). The same correspondent also recalled (pp97-8) the Boxing Day fair held in Wade St and known as the "horn fair", the name coming from grotesque gingerbread figures anything from a few inches to a yard long known as "the horn" and representing a man's head and shoulders with two trumpets branching out from his back. "Gilt horns", it was noted, "were everywhere by hundreds" - unfortunately it is not clear to what precisely this refers, whether to musical instruments or some sort of souvenir produced for the occasion. The gingerbread "horn" ritual associated with the fair is extremely interesting; possibly a folklorist could give more details of its origin, for it would appear to be the remnant of something of considerable antiquity. Stalls were set up along the sides of the street and the event was wild, noisy, and notable for petty gambling, according to the correspondent.

Such fairs, apart from their economic importance, were equally important to the cultural life of the poor. As E.P. Thompson notes, (1963: 444, 1968 ed), the working man's year in the early days of the Industrial Revolution "was made up of cycles of hardship and short commons, punctuated with 'feast' days when drink and meat were more plentiful, luxuries like oranges and ribbons were bought for the children, dancing, courtship, convivial visiting and sports took place"; and until late in the C19 a network of fairs existed throughout the country, attended by pedlars, cardsharpers, real or pretended gipsies, balladmongers, and hawkers. In 1838, the St James's Churchyard fair in Bristol, an important annual gathering since at least the early C17, was abolished, ending, as Latimer (1887: 243) put it, "saturnalia of which but a faint conception can be formed in our times". Latterly the fair's importance as a place for business rapidly decreased while shows, entertainments, and general disorder increased; but vested interests for long resisted its closure - as late as 1813 an offer of £3,000 compensation to the vestry for loss of tolls on closure of the fair was rejected as insufficient. Down to the end of the first quarter of the C19 the fair sold Yorkshire blankets and woollens, Macclesfield silks, Belfast and Lancashire linens, Kidderminster carpets, Sheffield cutlery, Walsall and Wolverhampton hardware, pottery from Staffordshire and elsewhere, cotton stockings from Tewkesbury, Buckinghamshire and Devon lace, Birmingham and London trinkets, Coventry ribbons and many other items from other areas as well as equally-large contribution from local industries. In addition, there were travelling exhibitions and entertainments - menageries, circuses, theatres, puppet shows, waxworks, flying coaches, rope-dancers, acrobats, conjurers, pig-faced ladies, living skeletons, and mummers - and the inevitable pickpockets, thieves, thimbleriggers, and swindlers. Stalls and stands took a month to build, and the fair was visited by everyone in the surrounding districts from the Duke of Beaufort's family to the children of the Kingswood colliers (Latimer 1887: 244-5). The West St and Wade St fairs must undoubtedly have been very similar. A vivid picture of the C19 migratory classes and their rounds of wakes and fairs is given by Samuel 1973: *passim*).

Above all, however, there was the release of the public house. As early as 1801 there were 14 within the narrow confines of St Jude's, and in the later third of the century there were 16. Even today there are 4 - the "Swan" (FIG 194) and "The Volunteer" (FIG 195) in New St, the "Sportsman's Arms" (FIG 196) in Wade St, and the "Swan with Two Necks" (FIG 197) in Little Ann St.

The 14 recorded in 1801 were distributed as follows:

Lamb St	Bell
New St	Swan, Dolphin
Gt Ann St	Three Tuns, Duke of Devonshire, Marquis of Granby
Gt George St	Jolly Tanners, Anchor (*later* Crown and Anchor), George
Wade St	Jolly Skinners, Harp and Crown, ship
Little Ann St	Swan (*later* Swan with two Necks)
Eugene St	Wool Pack

All of these in fact are in existence by the 1790s on directory evidence, and the "Swan" in New St is noted in 1787 and the "Dolphin" and the "Wool Pack" in 1775. Patchy directory entries make tracing difficult, particularly as early directories were not representative, had no listings by street, and entered public houses under the landlord's name not the name of the pub. An examination of the property-deeds would undoubtedly give accurate accounts of public houses in the area; the first Bristol directory, Sketchley's of 1775, notes a "Rising Sun" and a "Pigeon" on Wade St, for example, which had either closed before the end of the century or had changed their names, and also lists a "St George and Dragon" on Gt George St which could either be the "George" recorded from 1797 or an entirely different establishment (a "George and Dragon" is noted on Gt George St in 1794 and 1795). Wade St, to judge by directory entries, was the street of the publicans in the later C19, with Gt Ann, Gt George, and New Sts fulfilling that function in the earlier part of the century.

The area delimited in FIG 167 as St Jude's is - approximately - 18 acres, so that pub density in the later C19 was about one per 1.1 acres. Harrison, discussing density of pubs in various areas of London (B. Harrison 1973: 163), shows that in St James's in 1896 there was a pub for every 0.7 acre, in the City one for every 1.0 acre, and in the Strand one for every 2.0 acres. As Harrison notes, there are unfortunately no figures for pub density for areas within provincial towns, so it is impossible to say whether the St James's figure is a record for the country as a whole, but certainly it represents a far greater concentration than any figure for complete towns at this time. It is thus clear that the figure for St Jude's is among the very highest, and it should be remembered that the St Jude's pubs were all except two concentrated in the SE two-thirds of the area (i.e. on or SE of Wade St) so that the density within that part was more like one to 0.9 acre.

As noted earlier, the "Jolly Tanners" and "Jolly Skinners" indicate the area's leather trade. The "Wool Pack" may well refer to the weaving trade for which the suburb beyond Lawford's Gate was known in the earlier C18, though this trade had apparently died by the end of the century - the remains of this inn, showing a black and red tile front presumably of Victorian taste, still (1971) stand (FIG 185) - while the "Painters Arms", a public house of rather short life in the second half of the C19 on Wade St, no doubt alludes to the paint, colour, turpentine, and varnish industries noted earlier as being in the area in the C19.[95] The "Marquis of Granby", which continued into the early 1930s, may have dated from the 1760s, for the Marquis was a popular commander during the Seven Years' War, 1756-63, and the inn must have been named after him (cf Heal 1947: 10) (according to Little (1954: 231, 1967 ed) the Marquis subscribed - modestly - in 1744 to the Dowry Chapel at Hotwells, but whether he actually visited Bristol is not noted; the occasion for naming the inn, however, is much more likely to have been the Seven Years' War).[96]

Of the four taverns which remain, the "Swan" and the "Swan with Two Necks" go back to the C18, though their appearance has been heavily altered and their age - if indeed any appreciable amount of the C18 fabric survives - is not apparent. The chimney-pots on the former are of a common fin-de-siècle style; the heavy pebble stucco front for the upper two storeys of the latter looks more recent. The landlady of the "Swan with Two Necks" when asked about the age of the establishment said that the London stage-coaches used to leave from there. This can certainly never have been the case, but Latimer (1893: 269) noted that the landlord of the "Lamb" on West St was the local agent for a coach and waggon service to London advertised in 1747 - 6 days for passengers, 12-14 for freight which was taken to Newbury for barge transportation - and possibly this memory has somehow been transferred to the "Swan with Two Necks". (A little later, in 1760-61, there were celebrated poltergeist manifestations at the "Lamb"

(Latimer 1893: 348-50); regretably, this writer did not think to ask whether that story too had been transferred.) The shells of two or more taverns of C18 foundation still survive - the "Wool Pack" in Eugene St (FIG 185) and the "Ship" in Wade St (adjacent to the "Sportsman's Arms" (FIG 196)). The "Dolphin" in New St at the corner with Lamb St, which was also of C18 origin, continued into the later 1960s.

The "Sportsman's Arms" dates from the end of the C19, to which period its green-glaze tile front probably belongs - advantage was taken, presumably when it was erected, to set it farther back from the road and to set the pavement back with it, perhaps as part of a piecemeal plan of road widening (cf FIGS 178 and 196 with the 1883 OS plan - FIG 174 - which indicates a building here on the same line as the rest of the street front). The "Volunteer" is also a relatively recent public house, having been established in the 1850s, but as the only pre-clearance building now on New St it is probably typical of the street fronts of this part 100 and more years ago.

Young and Willmott point out (1957: 153, 142, 121, 1962 ed) that in Bethnal Green - where there is a tavern for every 400 people - pubs are important as neighbourhood centres, something planners of new model housing estates in Essex for Bethnal Green residents did not realize. Harrison, examining Victorian pubs, has emphasized the pub's three major roles in C19 society as transport centre, recreation centre, and meeting-place (B. Harrison 1973). The St Jude's pubs can never have been transport centres in the sense coaching-inns were, the landlady's story about the "Swan with Two Necks" not withstanding, and as noted above it was not until the later C19 that Wade St, the only thoroughfare of the area, predominated in its number of taverns. It is not known what part the St Jude's pubs played as public meeting-places, though in all probability they did fulfil this function at least at a local level, for in St Jude's in particular there could have been few other places available for public meetings. As Harrison notes, moreover (1973: 176), there were pubs for all classes, "medical students, prostitutes, servicemen, sportsmen, actors, foreigners, and lawyers" (as of course there still are today); and the "Jolly Tanners", "Jolly Skinners", "Wool Pack", and "Painters Arms" in St Jude's not only show in their names the occupations of the area, as noted above, but would also have been the places where those in the respective trades would have tended to gather. Marshall, examining the growth of C19 Barrow-in-Furness, makes the same point, noting that the pub was where the workmen's trade union lodges and friendly societies - unless they were avowedly teetotal - held their meetings (J.D. Marshall 1958: 327). In the northern Kensington Potteries in the middle of the C19 leisure activities centred round the public house, which was warm, dry, relatively spacious and airy compared to most of the homes of the clientele, and offered congenial company. Publicans organized sparring and boxing matches, rat-killing, and cock-fighting, on whose outcome bets were placed, and bull-baiting and dog-fighting were other entertainments; though by the end of the century, while betting and gambling were still in evidence, the blood-sports had apparently died out (Malcolmson 1970: 72-4). As noted above, the C18 "Pigeon" in St Jude's may have referred to pigeon-fancying as a local pastime; certainly the "Sportsman's Arms" must have originally aimed for a sporting clientele. The "Volunteer" presumably had a military or patriotic flavour about it originally; perhaps, in view of its being established in the 1850s, connected with the Crimean War. All this, of course, is closely allied to the third of Harrison's roles, that of recreation centre; and here the St Jude's establishments must have played a vital part - their concentration in Gt George, Gt Ann, and New Sts, the part of the area with the densest population (see pp699-704 above) is a proof of this.[97]

Anyone wondering how several pubs can flourish in one small street need only visit the "Swan", with its dining-parlour and eminently respectable lunch-hour clientele; and then the "Volunteer" with its spartan, scrubbed-board interior and 10-till-2 6-till-10 elderly regulars probably from Redwood House, the Salvation Army hostel at the corner of River and Wade Sts, to see the social difference between two inns a stone's-throw apart. It would have been interesting to compare both with the "Dolphin", only another stone's throw away from the "Swan"; certainly, while the difference between the "Swan" and the "Volunteer" is extreme, the "Sportsman's Arms" and the "Swan with Two Necks" also presented differences, albeit more subtle, of ownership and customer.

Further, despite the concentration of public houses in St Jude's, the trade of publican appears to have been prosperous enough, to judge by the longevity of most of the establishments. Indeed, Latimer noted that in Bristol at the beginning of the C19 "in spite of the multitudinous public-houses few trades were so prosperous as that of the innkeeper" (Latimer 1887: 4). Pubs and beerhouses abounded in the Nichol in Bethnal Green (T.H. Smith 1959: 41), and that area must have been one of the worst slums in all of East London, while at the end of the C19 five streets in an area immediately adjacent to the Potteries in northern Kensington had ten pubs, a concentration which represented approximately one pub to every 28 dwellings (Malcolmson 1970: 74). E.P. Thompson notes that in city slums publicans and small shopkeepers were among those often cited as owners of the worst properties (1963: 353, 1968 ed), and this type of situation may very well have held in St Jude's with its concentration of publicans and small independent tradesmen, though only a study of the area's property-deeds would confirm it; certainly, as noted in Section VI above, the last Thomas George pipemaker was landlord of some of the dwellings in the area. Publicans were also often employment-brokers, particularly in dock areas[98] - for example, until 1843 London coal-whippers could only obtain employment through publicans, who in turn would only employ men who spent up to 50% of their wages in the public house (E.P. Thompson 1963: 270, 1968 ed); and Malcolmson records a rather similar instance in the Potteries where a master bricklayer who was also a publican paid his men only at the pub and encouraged them to drink liberally against the credit of their wages (Malcolmson 1970: 73).

Unfortunately, little now remains of pre-clearance dwellings in the area apart from the public houses. FIGS 186 and 198-204 show those which are at present (1971) standing: FIG 186 shows a house in the unnamed alley off Eugene St behind Vestry Hall, numbered 1a Eugene St (see FIG 178); FIG 198 is a two-storey brick building with stone door- and window-surrounds at

15 Eugene St, at the corner with Little George St; FIG 199 is 46 Wade St, on the NE side between Lamb St and Gt Ann St; FIG 200 is 8 Wade St, latterly Bassett's newsagents but earlier the "Duke of York", a second half of the C19-earlier C20 tavern, on the NE side between Gt George St and River St, with the Victorian Gothic remains of St Jude's School, latterly a hall, to the left; FIG 201 is 17 Wade St, almost opposite the preceding illustration, a butcher's shop which actually reopened in 1969 but was once more closed in 1971; and FIGS 202-203 show the remains of Pratten's Ct, on Little Ann St between the "Swan with Two Necks" and Wade St - as can be seen it is now a tyre dump, but the outlines of plaster on the NE wall show the room size of the dwellings filling this court.

The dates of these structures, as with those of the older public houses, is uncertain, but those illustrations showing ruined walls suggest these structures to have been basically of stone, which might suggest a relatively early date. Considering the class of the area, it would be somewhat surprising if many of the earlier C18 domestic buildings were rebuilt in their subsequent lifetime other than those with a business occupation (e.g. the pubs) or any which collapsed. Several of the buildings, moreover - e.g. FIGS 186, 198, 201, and the "Ship" in FIG 196 - have pseudo-capitals to their door surrounds which are rather similar to those on doorways in Pipe Lane at Temple Meads Station (FIG 204) which Pevsner (1958: 429) dates to the late C18.[99] The surviving structures certainly appear to be pre-Victorian in style, if one takes St Philip's Marsh[100] working-class brick row-housing as typical of Victorian Bristol's dwellings for that class, for example.

Illustrations of any kind of the St Jude's area are unfortunately rare, and photographs are almost non-existent. The earliest illustrations of the area known to this writer are two pen and ink and watercolour drawings (FIGS 183 and 184) of the two bridges across the Frome, Traitor's or Frome Bridge and Quaker's Bridge, both by H. O'Neill and dated 1821, and both in the Braikenridge Collection in Bristol City Museum and Art Gallery; but their catalogue descriptions there are confused (I am grateful to F.W. Greenacre, Curator, Department of Fine Art, Bristol City Museum and Art Gallery _in litt._ 18 April 1973 for these entries). As noted earlier (p701 n. 89), FIC 183 is catalogued "Traitors Bridge at the end of the Rope Walk rebuilt with improvements in 1798", which seems straightforward enough;
while FIG 184 is catalogued "Frome Bridge the first bridge above Traitors Bridge at Earls Mead", an identification which raises several problems. However, a close comparison of the drawings with Ashmead's detailed plan of seven years later (FIG 168) suggests that FIG 183 is in fact a view, looking south, of Quaker's Bridge (which _was_ also known by the mid-C19 as Traitor's Bridge), with the houses of River Ct on the left; while FIG 184 is a view, looking NE, of Frome Bridge (the original Traitor's Bridge), with the junction of Wade and River Sts on the right and a house fronting Houlton St on the extreme left. The former identification is based on the polygonal building visible in the centre middleground of the illustration, which can plausibly be equated with the similarly-shaped structure shown by Ashmead behind River Ct; while in FIG 184 the buildings on the extreme left can be equated with those shown by Ashmead on the NW bank of the Frome where Houlton St joins Frome or Traitor's Bridge - there are no buildings shown by

Ashmead at the NW end of Quaker's Bridge, but the view has to be looking approximately north because of the high ground visible in the far distance - while the buildings on the right can be equated with the short cul-de-sac continuing the line of River St NE of Wade St shown by Ashmead and still in existence in 1903 (FIG 175). Unfortunately, neither drawing shows much of the St Jude's area, though both River Ct and the River St-Wade St corner show three-storey housing. It is doubtful, however, that the areas depicted looked as pleasant and silvan as they appear here.

The only other drawings of the area known to this writer are a series made in 1905 of the newly-opened municipal common lodging-house at the corner of River and Wade Sts and now the Salvation Army's Redwood House, which are described below when discussing the St Jude's lodging-houses below (p. 754), and a drawing of the entrance to Pinnel St from Pointz Pool dated 1907 and described earlier (pp699-700). Regarding photographs, the extensive series of albums filled with views of Bristol going back to the late 1830s published by Reece Winstone contain none of the area (inquiries to Winstone as to whether any were available in his collections brought no reply). However, as noted earlier, a photograph of Grace's Ct off Gt George St (FIG 182) appeared in a 1903 article, and the same article has two pictures of Gt George St (Anonymous 1903: 448, 450) - one a general view along it. The general view (FIG 205) shows a side of monotonously similar three-storey dwellings and a cobbled street and flagged pavement; the other view (FIG 206) shows a bay ground-floor window and a doorway, and again the cobbled street. (Cobbled streets and pavements "pitched...with stones of a description that would furnish formidable ammunition to defenders of a barricade" were noted in 1850 (anonymous correspondent to the Examiner 24 August 1850); the 1903 pictures, including that of Grace's Ct (FIG 182), indicate some pavements had flagstones by that date, but cobbled pavements still exist in the unnamed alley off Eugene St (FIGS 185-86) and cobbled road surfaces still exist there and at least in parts of other road surfaces (FIGS 180, 185, 197-98), sometimes covered by a layer of partly worn-off tar.) Again as noted earlier, the presumably C19 building on the site of the Friends' poorhouse which the 1883 OS plan indicates was a school at that time, is probably the building illustrated in FIG 190 (undated but probably ca.1930). The picture showing children outside one of the Gt Ann St BCM stations (FIG 193, top) has also been noted above, and the same illustration shows two other views presumably of the St Jude's area. Neither is identified, but a careful examination of the bottom picture suggests it may be Allen Ct (earlier Dolman Ct) off Eugene St. The centre illustration appears to be of another of the many courts of the area, but no identification can be hazarded. No dates are available for the taking of these three photographs, but there is no reason to believe they antedate their date of publication, 1927, by much, particularly as it was not until the early 1930s that a start was made on systematically clearing and redeveloping the area. To this early period of clearance and redevelopment must belong FIG 208, a photograph in Bristol City Museum's collections looking NE along Gt George St, with Wade St just visible crossing in the middle distance. That redevelopment has started is indicated by the building just visible on the extreme left, set back from the road: this is Whitson House (cf FIG 181), the earliest multiple-dwelling unit built in this area by the Corporation. The buildings on the right, however, illustrate vividly what the area was like prior to redevelopment. The street, as in previous illustrations, is cobbled; and the dilapidated front nearest the viewer on the right (the number visible is 40-something - it has to be an even number) shows the same sort of pseudo-capital door surrounds noted above occuring elsewhere in the area, and also carved window-lintels on the ground floor. (The picture is undated, but internal evidence puts it to between late 1937 and mid-1940 or perhaps late 1939: Whitson House provides a terminus post quem, for its building commenced in April 1937 and its first floor was ready for occupancy in November of that year; and a terminus ante quem of at latest mid-1940 and in all probability somewhat earlier is provided by the fact that the SE side of Gt George St is still entirely unaltered whereas in mid-1940 Elton House, another Corporation multiple-dwelling unit, was completed at the south corner of Gt George and Wade Sts, with the front on Gt George St stretching as far SW as opposite Whitson House. I am very grateful to the City Housing Department, Bristol, for the construction dates of Whitson and Elton Houses (_in litt._ 5 July 1974).)

It would be difficult to hazard a guess at the ages of the buildings shown in these older illustrations, but the regularity of appearance noted above in describing FIG 190 is confirmed by the accompanying text, which refers to Gt George St as "lined with grimy, stucco-fronted houses, the monotony of the perspective broken only by a single modern red-brick dwelling which stands as a splash of colour intensifying the blackness of its neighbours" (Anonymous 1903: 448); and also by the reminiscences of a granddaughter of Thomas George III (D 1935) who recalled the buildings at the time her grandfather lived on Gt George St. This regularity suggests a coherent planning, and possibly many of the buildings dated back to the C18 and were in fact the original structures erected after Wade let out the area.

An anonymous correspondent in 1850, commenting about St Philip and Jacob Out-parish in general, observed:

> As for the houses, they present every appearance of having been built not only _for_ the poor, but _by_ the poor, and to have known no other tenants. The greater number are mere shells, the walls often apparently, only one brick thick, and very many of them have become so utterly ruinous as, even here, to be deserted and shut up; while from holes, once containing windows, in the tottering walls of others, almost equally dilapidated, the occasional protrusion of a head gives token they are not yet left without inhabitants (letter to the _Examiner_, 24 August 1850).

This is, of course, a generalized statement and the reporter was ranging over a somewhat wider area than St Jude's as defined here, including the West St-Bragg's Lane-Bull Paunch Lane-Gloucester Lane-Brick St area directly south of Lamb St, for in a subsequent letter (31 August) he says St Jude's church was in the very centre of the area described; he also specifically contrasts this appearance with that of the in-parish which though now slum still retained vestiges of a more affluent occupation in earlier times. His description, however, agrees with other evidence that the area outside

Lawford's Gate was from the first one with a poor, high-density population and housing to match. In at least one lane of the area the building had projecting second storeys (24 August letter), suggesting structures of some age.

It is against this background that the pipemaking industry in St Jude's in the early C19 must be set. As noted in Section VI above, with the exception of William Showell who is noted in Houlton St across the Frome from St Jude's in 1775 and Robert Carter F 1767 who voted from St Philip and Jacob Out-parish in 1784 after having been recorded within the city at the 1774 and 1781 elections, the first pipemaker in the eastern suburbs beyond the city boundary was Nicholas Kennicott, who became free 1809 and first appears in the trade directory for 1810, in Lamb St. In 1815 no fewer than 7 of the 13 directory-listed pipemakers are in St Jude's - two each in Lamb, Gt Ann, and Gt George Sts, and one in New St. This sort of proportion - half to four-fifths - continues until the industry collapses in the 1860s. In 1850, for example - during the period when the highest number of C19 makers was recorded - 17 of the 23 makers listed in Matthews's directory lived in St Jude's: five on Gt Ann St, four each on Gt George and New Sts, two on Wade St, and one each on Lamb and Little Ann Sts. The appearance of pipemaking in St Jude's in the 1810s therefore occurs in an area already crowded, with housing already the better part of a century old and showing evidence of slum development, and with a working-class tradition of small independent enterprises and a scattering of larger industries often of a noisome nature such as tanning, gluemaking, and brewing. An abundance of public houses, a possibly complete lack of churches, and two poorhouses and a prison bordering the area all reinforce the impression of the area being socially depressed.

An important question in the revival of the Bristol pipemaking industry in the early C19 is whether it is a case of pipemakers moving into St Jude's or whether the industry restarted there because it was a trade typical of those small independent cafts of which the area was already full before ca.1800 on trade directory evidence. There is in fact evidence for both causes, but unfortunately directory entries do not allow, save for rare and generally uncertain cases, the tracing back of pipemaking families prior to their first appearance in that trade. Directories list only independent tradesmen and the like; a pipemaker initially working as a journeyman for a firm and then setting up in business for himself would not be listed prior to becoming independent. The best hope here lies in the property-deeds.

As noted in Section VI above, the revival of Bristol pipemaking in the early C19 appears to owe relatively little to the C18 traditions of the industry. Apprenticeship and freedom as means of training for and entering into business were almost dead and many of those noted becoming pipemakers appear to have no connections either directly or indirectly with the older families. This in itself suggests the industry could have restarted almost spontaneously in a suitable area, something which would certainly agree with the rapid appearance of so many makers in the one area in such a short period.

There are, however, other possibilities to explain the rapid appearance of St Jude's as the C19 Bristol pipemaking quartier. The area was physically part of the city but legally (until 1835) outside it and in Gloucestershire, so that any city legislation to the disadvantage of pipemaking, such as a ban on kilns or any industry in residential areas or laws regarding wages and employment, would not apply while at the same time the area, being contiguous to the city, could benefit from city markets and possibly undersell city competitors. It cannot be coincidence that the part of St Jude's showing the heaviest concentration of occupation - lanes, courts, back-garden buildings - from even before 1800 (see above) is that SW of Wade St, and particularly the New St area, the part nearest the city boundary; and it is probably no more coincidence that pipemakers throughout the C19 concentrate in the same area - Gt George, Gt Ann, and New Sts (cf FIGS 142-45). Latimer records no events ca.1810 which might have caused the industry to relocate, but an examination of Council records might reveal some laws restricting industral activity in the central area of the city clearly occupied by pipemakers in the C18 (Section V above); certainly, from the 1820s onwards virtually all pipemakers recorded outside St Jude's were either south of the river in St Mary Redcliff and Temple, an area generally associated with industry last century and earlier, particularly glass and pottery (Buchanan and Cossons 1969: 146; Pountney 1920: map between pp358 and 359), or in a handful of isolated cases elsewhere in industrial areas of St Philip and Jacob and in Bedminster (FIGS 144-45). However, one must consider George James, recorded on Lamb St 1817-19, who is presumably the George James noted in Lewin's Mead (i.e. back in the city) intermittently from 1826 to 1840 and succeeded by Mary James, presumably his wife, noted in 1842 - this hardly suggests a rigid policy of excluding pipemakers from the central area.

D.M. Smith in studying the Birmingham gunmaking quartier suggests that "The presence of such a highly specialized industrial zone with a preponderance of very small concerns is an uncommon but not unique feature of Britain's industrial towns and cities" (D.M. Smith 1964: 106), and he instances the Birmingham jewellery area and the now-defunct silk-weaving areas of Coventry and Macclesfield as similar examples. However, as noted earlier (4: passim), this feature certainly appears to have been relatively common among pipemakers, and as again noted earlier (p.384 above), there are a number of examples of such quartiers for various trades in London. There are some points of similarity between the movements of the Birmingham gun trade and the Bristol clay pipe trade from the C18, and in view of Smith's excellent treatment of the former (cf also Wise 1951) it is worth noting these similarities here.

Just as St Jude's was not originally Bristol's pipemaking area, so the present Birmingham gunmaking quartier of St Mary's was not the original seat of that industry. At the beginning of the C18, gunmaking in Birmingham was concentrated in the Digbeth area south of the city centre, an area which became congested as this trade expanded. In the early 1740s, the present gun quarter of St Mary's was being developed as a residential area. Unlike many other such areas being built on what was then the outskirts of Birmingham, this area did not have restrictive covenants prohibiting industrial development, and from relatively early on Birmingham gunmakers began to move into the area, though unlike the pipemakers in St Jude's the movement was a slow, if steady, one: in 1777, 16% of Birmingham gunmakers were in St Mary's; by 1815 it was 28%; by 1829, 62%; by 1868 it had dropped somewhat to 53% but by 1900 it was up to 71%, and as the industry declined in the C20 the percentage became even higher (D.M. Smith 1964: 110-2, fig 2, table 2).

The original buildings in the St Mary's quartier still had, until recent demolition, their original Georgian facade, and it is possible the earliest gunmakers to move into the area were moving to places they intended to use solely as residences, for the best houses in the area appear to have been as good as any then occupied by the town's wealthiest merchants and manufacturers. However, the lack of restrictions on industrial development in the area, together with the entrepreneurial method of gun-manufacture, with numbers of highly-specialized craftsmen producing parts for the final product for whom closeness of workshops was important, easily led to the industrialization of properties, and once started such a move generated its own momentum. One early maker in the area, for example, erected a Proof House where he proved his own barrels and those of any other gunmaker who cared to send his barrels to him, and this would have added to the attraction of the area for other gunmakers (Wise 1951: 68 n.16). Here St Mary's differs from St Jude's, for St Jude's was certainly not designed originally as an upper-class residential area, and the pipemaking trade does not involve specialized aspects such as those of the material makers, setters up, and gunmakers of the gun trade, though at least latterly pipes were being made in St Jude's on a contract basis with local individuals who were probably supplied the clay and made the pipes up to, but not including, the firing stage for the major pipemaking businesses of the area (pp176, 406, 542-3 above; see also below pp734-5). However, the extending of premises into the original back-gardens in St Mary's (D.M. Smith 1964: 112-3, fig 3, 116 fig 4) is certainly a feature repeated in St Jude's (see above confirming the original essentially non-industrial intention for the two areas.

Wise's examination of Birmingham gun and jewellery quarters (Wise 1951) suggests the latter trade had some parallels with the former. The jewellery trade did not become localized as early as the gun trade, but already by 1777 the Newhall Estate was beginning to fill with jewellers in the broadest sense of those making the notorious Birmingham "toys" or "pretences". As the quality of the trade improved in the late C18 specialists began to appear, among them silversmiths who began to concentrate in the new streets of the Newhall Estate NW of the original area and in the neighbourhood of St Paul's Church, and later as housing development spread NW along the West Bromwich road in the area immediately NW of the church. In the first quarter of the C19 begins the first development of a localized jewellery quarter, employees of the newly-developing high-quality trades "continuously setting up on their own account" and thereby increasing the number of businesses in existence. With the recovery in the 1830s from the depression in the previous decade, expansion and specialization continued and the industry spread NW again as new houses were erected. This trend north-westwards continued as newer and larger houses were built, and by 1865 the jewellery trade had settled in its present quarter in the Vyse St area, though even so it has extended ever NW in the C20 along the West Bromwich road (Wise 1951: 68-70, 67 fig 3, 61 fig 1).

Here movement appears to be clearly associated with increasing specialization and opening up of small businesses by employees of other businesses, neither of which appears to have contributed to the development of the St Jude's pipemaking area in Bristol, though certainly, as noted earlier (p.542), St Jude's pipemakers - and almost certainly pipemakers everywhere as a group (cf 4: passim) - tended to set up their own little businesses as soon as they could "set up an oven and purchase a mould and a little clay". However, the factors causing the rise of the Birmingham gun and jewellery quartiers do not seem to apply to any real degree to the emergence of St Jude's as a pipemaking quartier.

Detailed investigation suggests no simple solution to the problem of why St Jude's became a pipemaking area. The revival of the industry in the C19 starts ca.1805, for it is at this time makers start to take their freedom and take apprentices again. In 1805 the directory lists eight makers, five of whom - John Carey, Joseph Edwards II, Martha Okely, Samuel Richards II, and Anna Viner - are of the old, pre-American Revolution days of the industry (cf Section VI above). Of the three newcomers, Wm Pike and Co of Christmas St appear only for the years 1806-12, and the business was probably a sideline for Pike who appears to have been landlord of the "Globe", also on Christmas St, from 1803 to 1821; while John Mates Young of Merchant St, listed as a pipemaker 1803-06, may have had several irons in the fire for he was an auctioneer and broker in 1800 and either he or a relative (probably his father) was a cabinet-maker in 1797 and 1798 (a Mary Young, presumably the widow, is listed 1807-08; the business continues as Sheffield and Haynes 1809-12 and under James Sheffield 1813-25, but again pipemaking was only part of wider commercial interests, Sheffield being at various times a tobacconist, grocer, and broker). The third newcomer is John Ring and Co of Temple Back, a family of potters[101] and later coal-merchants which continued to make pipes until 1883 or 1884; again, while this is a much longer-lived concern, pipemaking is only one branch of the business.

The impression is, therefore, that in 1805 the pipe industry was still predominantly in traditional hands and that those makers new to the trade were speculator-businessmen more typical of the C19, with commercial interests and investments spread to several occupations. The revival of the Bristol industry thus seems primarily to have been a spontaneous affair among the surviving C18 makers no doubt stimulated by a return to better economic conditions after the collapse of the industry in the 1760s and 1770s with the loss of the American colonial trade. This is further borne out by the final apprentice-roll entries: as noted in Section IV above, five pipemaking businesses - the Careys, Richardses, Okelys, William Thomas, and Thomas George - continued to take apprentices during the black days from the 1770s and up to 1827 when the last pipemaker-apprentice is recorded, and of these business-owners all were of pre-American Revolution origins with the exception of William Thomas, which shows that as long as there were makers of the old tradition the old procedures were recognised. The cessation of the latter coincides with the rising new generation of makers.

By 1815 the picture is changing. The Carey family, who appear to have been continually migrating (FIG 207), have moved into St Jude's, but the surviving pipemakers of the old order - Edwards, Okely, and Richards -

remain at their old locations and indeed continue to do so as long as they remain in Bristol. A new member of this group appears, Thomas George, F 1812 by virtue of having married Ann a sister or half-sister of William Okely, living in St Jude's, though his is an anomalous case and will be discussed separately. Of the seven "new order" makers listed two are members of the Ring family and one is Sheffield the successor of Young noted above; the remaining four are all newcomers working in St Jude's. The move of the Careys is particularly interesting, for in 1812, in which year Israel II appears in the directories on Ann [sic] St in St Jude's, he votes from Broadmead in St James, in the centre of the city; while in 1818, by which time he is on Gt George St in St Jude's according to the directories, he votes from there. The implication is that initially Carey was moving factory site and only later did he decide to leave the more socially-acceptable city centre to be with his business. The Broadmead address is confirmed by the directoies, which list his living there 1811-13 (for more detail on the Carey family business see Section VI above).

By 1825 the old guard is represented only by one of the Careys and two of the George family, all three working in St Jude's; and only 2 of the 11 makers listed work outside St Jude's - the Ring firm and a newcomer Thomas Fisher in Temple St. By 1835 there are 18 makers listed and the industry is rapidly expanding, and only the two or three members of the George family[102] have ties with the C18 industry. The number of makers in St Jude's, 11 of the 18, is lower than average, though 3 more - David George, White, and Winchester - are in St Philip and Jacob In-parish and very near the St Jude's area. Apart from the Ring firm, and George James now in Lewin's Mead (see above), the others outside St Jude's are Charles Eve at 72 Redcliff St and William Watkins at 15 Temple St.

A late case of a maker appearing in St Jude's who had certainly been trained outside the area, though he may have worked there from long before his first directory appearance, is Philip Guy. Guy was apprenticed 1812 to William Okely, though he did not take his freedom until 1838. No further references to him occur until 1850, when it is presumably he who forms a partnership with James Saunders which continues at 10 Gt Ann St until 1860. Saunders, A 1777 as a "china painter" and F 1812 as a pipemaker, first appears in directories in 1815 on Ann St [sic], then disappears until 1825 though the 1818 and 1820 poll-books record him on Gt Ann St: he reappears 1825-31 at 39 Gt Ann St and 1832-48 at number 19, being listed as Sa[u]nders and Down from 1839, and in 1849 Sa[u]nders and Down appear at number 10. Unless he lived to be ca.100 Saunders must have been dead by 1860 (he is last definitely recorded in the 1841 polls); presumably latterly first Down and then Guy were the active partners. The property-deeds would probably give the details; Guy is recorded alone at 10 Gt Ann St for one more year, 1861. As William Okely was at Under the Bank all the time Guy would have been his apprentice it seems clear Guy moved at some time subsequently into St Jude's, probably as a journeyman until his association with Saunders in 1850.

Other examples of makers, never listed by directories and therefore probably journeymen, drifting into St Jude's are found in the C19 poll books, as noted briefly in Section VI above. James Edgar F 1812, for example, votes in that year from Narrow Plain in St Philip and Jacob

In-parish, near enough to St Jude's for him to have been employed there, but in 1818 and 1820 is noted at Host St and was thus possibly working for William Okely. However, by 1830, and in 1832, 1835, and 1837, he is in Gt George St, indicating he had moved to where the action was. John Tovey, also F 1812, was on Castle St at that date, but had begun a westward drift by 1818, for in that year and in 1820 he votes from Old Market St. By 1830 he had moved into St Jude's, voting from Gt George St in that year and in 1832 and 1835. By 1837 he had actually moved farther west and slightly beyond St Jude's, being noted in the poll book for that year on Earl St, a narrow lane off Pennywell Lane or Rd a little past Eugene St, and he is probably there in 1841 as well, though the poll book gives his address as Pennywell Rd. (Earl St is noted by Ashmead (FIG 168) as a cul-de-sac footpath with a row of houses and backgardens on its SW side; it and its houses were still there, though unnamed, in 1903 (FIG 175), almost opposite Newton St, but by 1952 it had gone (FIG 176), most of its site being under the engineering works which even since that date has expanded to entirely cover the area behind Eugene St and Vestry Hall as far as White St (cf FIGS 176 and 178, the latter the 1963 OS plan). Ashmead shows the area as still substantially open countryside, so Edgar may have been successful enough to move from the slums, though the change from Ashmead's Pennywell "Lane" to the poll-book's Pennywell "Road" indicates the rapid urban expansion in the area.)

Another example is William Player F 1830, who votes from Redcross St, adjacent to New St and Lamb St but just inside St Philip and Jacob In-parish, in 1830 and 1835 but has moved to Gt Ann St by 1841. This could indicate a change of employer, for while living in Redcross St he could have been working for the White family who were making pipes then at Rich's Buildings, the northernmost part - now demolished but still there in 1903 - of Asher Lane which runs north off Redcross St.[103] Similarly, John Watkins F 1830 votes in that year from Temple - no street is given, but perhaps he was working for Thomas Fisher who was at 70 Temple St 1825-32 - but in 1832 and 1835 is in Eugene St, presumably as a journeyman to a St Jude's maker. The Appleford family, Thomas Sr F 1804 and Thomas jr F 1830, is another example, the father being recorded at Mary Bush Lane in Castle Precincts in 1812 but the son being in Gt Ann St in 1830 (by which time his father was dead) and in 1832. (However, not all the evidence falls so neatly into place: earlier the case of George James apparently moving out of St Jude's in the 1820s to work back in Lewin's Mead, one of the central pipemaking areas, was noted; and as noted in Section V above James Moon F 1808 votes from Gt Ann St in 1812, 1818, and 1820, but by 1830 is at Rose St in Temple, where he is also in 1832, and in 1835 is in adjacent Avon St (now covered by Temple Way). As he appears in directories only for 1833 and 1834 - in Pipe Lane (FIG 204), adjacent to Rose and Avon Sts - it is possible he started out as a journeyman with the earliest makers in St Jude's and subsequently moved out to found his own business in a less crowded area. Nicholas Kennicott, the first maker in St Jude's, also appears to have left there before leaving the city altogether, for although listed in the directories in Lamb St 1810-12 he votes at the October 1812 election from Pile St, St Mary Redcliffe, before disappearing for 18 years to reappear in 1830 in Swansea.)

From all this it would seem the new makers contributing to the regrowth of the Bristol pipe industry in the earlier C19 are predominantly those appearing in St Jude's and that they drew labour from the central areas of the city as the industry there died. Only the Carey family (a probable member of which, if old Thomas George was right, was still working in St Jude's in the later C19) of the ancien regime actually moved from their later C18 place of work within the city to St Jude's. The George family, as noted above, is somewhat anomalous. Thomas George I took his freedom 1812 having married Ann daughter of John Okely II and first appears in the trade directories in 1815 - under the "late entries", suggesting he may just have set up independent business. A brief examination of the property-deeds for his Gt Ann St premises (BAO 13480 passim), indicated George had bought it (for £150) apparently by 1810 and that he seems to have been working in association with a Thomas Okely. This Okely must be an in-law, probably a brother of half-brother of Ann and William, but how he fits in here is unclear. If he was a pipemaker he does not appear in apprentice or freedom rolls nor in trade directories. If the Thomas George who died in 1968 was correct, Thomas George I at one time assisted John Carey making pipes for the West Africa trade at his Old Market St premises, apparently ca.1800 (Sections VI and VII(b)(3) above), suggesting George may indeed have been a journeyman in the pipe trade before setting up for himself.

Thomas George I died in 1835, and though his age at death is not known his son James who died in 1873 was 86 when he died and therefore born ca.1787, from which one may assume Thomas was married by that date. Thomas's wife Ann died 1847 aged 81 and was thus born ca.1766, two years before her father John Okely II became free, so she must have married ca.21. Thomas George I was therefore probably born ca.1765. He obviously earned his living for a long time between his marriage ca.1786 and the time he appears to launch into pipemaking in 1815 aged ca.50: he could have worked with his in-laws or for someone else as a journeyman pipemaker or even like John Frederick Bryant jr in a variety of other trades until the revival of the industry offered the opportunity for him to eventually set up what was to be the last pipemaking business in Bristol. The problem as to whether he was a native of St Jude's or moved there - perhaps because of the embryo industry rapidly growing there, perhaps as an agreement with his in-laws to work well away from Okely territory - remains unsolved. If he came from St Jude's he no doubt appreciated the advantages of cheap property and ready labour there, and it is possible he did come from there, for a John George appears as an excise officer on Gt Ann St in the 1790s. An examination of Gt Ann St property-deeds would probably show whether this George was a relative.

Another maker who may have been a native of St Jude's is George Gay. Gay is recorded as a pipemaker in New St from 1832 to 1863; throughout this period he was also a carpenter, and from 1852 was in addition an undertaker. In 1798 a Gay and Son are noted as carpenters and joiners in New St, in 1800 a John Gay is listed with the same trades on the same street, and in 1805 a William Gay appears as a carpenter there, suggesting the Gay family had been on New St and in the carpentry business from before 1800 and long before a member added pipemaking in 1832. The 1828 name Gay's Ct for the court in the New St-Pinnel St-Gt Ann St block called Burge's Ct by 1883 may be significant here, the Gay family possibly originally owning that property; again, an examination of area property-deeds would resolve the matter.

In summary, it can be said there is evidence both for city pipemaking moving into St Jude's and St Jude's inhabitants adopting pipemaking as a new industry. It seems likely the latter is the predominating factor in St Jude's becoming a pipemakers' ghetto in the C19. The industry begins to revive ca.1805, before St Jude's is noted having pipemakers, but there is no doubt the concentration in the latter area is what builds up the industry. As an area, St Jude's had the advantages of already being one of small independent trades and having a high density of poor inhabitants making for cheap available labour: prior to 1835 the area was also beyond the city's authority though able to profit from its market. Specific reasons for the sudden emergence in the 1810s of St Jude's as the Bristol pipemaking centre are, however, as yet lacking.

The following are the pipemakers listed in the Matthews's directories for 1805, 1815, 1825, and 1835. Names asterisked are those associated with C18 pipemaking families, either by descent, marriage, or apprenticeship; St Jude's addresses are underlined:

1805

*John Carey; Redcross St
*Joseph Edwards; Temple St
*Martha Okely; Lewin's Mead
William Pike and Co; 20 Christmas St
*Samuel Richards; 34 Thomas St
John Ring and Co; Temple Back
*Anna Viner; Under the Bank [Colston Ave]
John Mates Young; 1 Merchant St

1815

*John Carey; Lamb St
*Israel Carey; George's [sic] St - Counter, 4 River St, Rope Walk
*Joseph Edwards; Temple St
*Thomas George; Gt Ann St without
*William Okely; Under the Bank
Roberts and Steevens; George's St without
*Samuel Richards; 34 Thomas St
Ring and Cookworthy; Temple Back
Sarah Ring; 14 Bath St
James Sa[u]nders; Ann [sic] St without
James Sheffield; 1-2 Merchant St
Joseph White; New St
Thomas Williams; Lamb St, Lawford's Gate

1825

Peter Baston; 17 New St without
*Israel Carey; New St without
Thomas Fisher; 70 Temple St
*Thomas George; 5 Gt Ann St
*James George; 11 Gt Ann St
Ring and Co; Avon St, Gt Gardens
Thomas Roberts; Gt George St without

James Sa[u]nders; 39 Gt Ann St
John Williams; Lamb St without
William Willis; 17 Gt Ann St
James Sheffield; 1 Merchant St
1835
Peter Baston; 17 New St
Joseph Ellis; Gt George St without
Charles Eve; 72 Redcliff St
George Gay; New St without
*?David George; St Philip's Plain
*James George; 11 Gt Ann St
*Thomas George; 5 Gt Ann St
George James; Lewin's Mead
William Pratt; 50 New St
Richard Frank Ring; Temple Back
Sarah Roberts; Gt George St, Ayre's Lane
Thomas Roberts; 14 Gt George St
James Sa[u]nders; 19 Gt Ann St
William Thomas; 20 Little George St
William Watkins; 15 Temple St
Joseph White; Rich's Blgs, Redcross St
Peter Williams; 10 Gt Ann St without
James Winchester; Bread St, St Philips

As noted in Section VI above, the number of makers recorded in the C19 rises rapidly in the 1820s and particularly the 1830s, the high-point of the industry, at least in terms of number of businesses, being in the 1840s and 1850s. The highest number of makers recorded in Matthews's directories is 23, in 1850, though there is evidence from other directories appearing in the 1850s (see Section VI) that there were up to at least 27 makers in business at that time. Between 1861 and 1867, however, the bottom falls out of the industry, the number of makers listed by Matthews's directories falling from 18 to 7, and from the 1870s there is only an average of 5 makers. By 1900 there are only three, by 1912 only one, and after 1921, none.

By good fortune, an anonymous correspondent to the Examiner wrote from August to at least October 1850 a weekly series of "Letters on the Condition of the Working-Classes of Bristol and its Vicinity", including St Jude's which appeared in the paper and were reprinted a week later in pamphlet form. At least 11 letters appeared, and more were promised, but the bound copy in Bristol Public Library is incomplete, there being no letters in it beyond number XI and numbers IV and VIII being missing (confusingly, letters V and IX are misnumbered IV and VIII respectively). Some pages are also partly unreadable because of bad binding. St Jude's is discussed in the first 7 letters, though in fact the whole of letter VI and the greater parts of numbers V and VII are a diatribe against Mormonism, which had been enjoying spectacular success in industrial areas of England around this time. In fact, the Examiner, no doubt inspired by Mayhew's reports in the London Morning Chronicle from September 1849, appears to have sent a reporter to investigate working-class conditions, for the first "letter" (17

August) commences:

> SIR, - In accordance with your instructions, and with a view to a regular and systematic investigation, I have taken some steps towards the commencement of an inquiry into the moral and physical condition of the labouring classes and poor of the city and vicinity of Bristol.

The first letter includes a description of the work, wages, and living-conditions of a woman pipemaker. The manufacturing process has been noted in 2: VIII and the wages discussed in relation to other C19 evidence in 5: II, and the living-conditions were described in Section VI above, but the last are worth noting again here to compare with the picture of St Jude's already evoked by other evidence. Pipemaking was described as one of the staple industries of the district, most of the workers being women employed in the small "factories" of the area. The woman described was apparently in effect a subcontractor for one of these firms, manufacturing pipes at home up to but excluding the firing stage and selling them at 4d a gross of 180 to the firm for firing and retailing. Presumably she was supplied with clay by the firm, but she had to pay a man 5-1/2d a week to prepare the clay for her. She had taken up pipemaking on the death of her husband, a seaman, in order to keep herself and young family: a boy of unspecified age, a girl aged 5 or 6, and another aged 14. Because she was "not strong enough to be very expert in the business" her production rate was only 9 gross a week or, assuming a six-day week, 1-1/2 gross a day - as noted in 5: II, a skilled pipemaker could make ca.3 gross a day. At 4d a gross she thus earned 3s a week minus the 5-1/2d to the man preparing the clay; this supposes steady employment, however, and the anonymous reporter notes this was not always the case; indeed, in his following letter (24 August) he noted that a woman who had been a pipemaker since a girl and was considered an expert at the trade had subsequently assured him her earnings never averaged more than ca.4s a week and had recently been much less, work being particularly scarce at that time and the American and Canadian markets having been almost wholly lost within the previous three or four years.

The widow's income was supplemented by 2s a week brought in by the son, who picked horsehair, and 1s and a loaf of bread from the parish to support the girl, making a total income of 5s6-1/2d plus a loaf. A daughter living away from home occasionally gave her mother a dress. Of the 5s6-1/2d, rent accounted for 1s6d (reduced 3d on the death of her husband) and most of the rest went on bread. Potatoes were had twice or three times a week and a half or three-quarters lb of meat was bought on a Saturday and made to last as long as possible into the next week. Butter was not normally available; the remaining expense was 2-1/2d for an oz of tea, which was measured out in quantities measuring a large thimbleful and made to last the week.

The family sitting-room - they had three small rooms - was described as reasonably furnished for the locality. It had three or four wooden chairs, two small tables, a fender, and a few other items. There was a set of ill-matched crockery in an open cupboard, some glass and earthenware ornaments including a glass globe full of salt hanging from the ceiling - apparently a favourite ornament among the poor - a branch of coral, several small coloured prints, and two religious pictures. The family was Baptist, finding they could understand what was being said better there than in the

Anglican church.

From this it appears that a widow and three children could actually live in St Jude's for under 6s a week in 1850 and not, apparently, in the squalor of the very worst areas, for they could afford three rooms. The appalling part, however, was the diet indicated, which was very largely bread with some potatoes and a little meat and an infinitismal amount of tea. Butter, it was specifically noted, was not normally used because that within their price-range was generally bad; milk is not noted. This seems to have been entirely typical of the area: in his third letter (31 August) the correspondent notes whole families existing

> to a very great extent, on the smallest amount of food by which existence is to be supported; from time to time, they die of want, or of sickness the result of want;....The great majority [of the inhaitants] very seldom taste meat; bread is their chief - almost their only - subsistence, and numbers have not nearly enough, even of this.

The same letter also noted there was a lack of water in the dwellings, even for drinking purposes; and in the preceding letter he noted that "Twice of thrice in each day, kettles, cans, and pitchers come into requisition; and at such times this universal water-carrying, with the appearence and manners of those engaged in it, recall forcibly the characteristics of some of the peninsular or continental cities."

Even an expert pipemaker, as noted above, could earn only ca.4s a week at this time, even when fully employed; however, with both adults in a family working plus some earnings from children income would have been, in times of steady employment, perhaps ca.12s a week. With a full family, however, rent, as indicated above, was higher and so of course would have been the cost of food and other necessities; apart from the occasional dress from an older daughter, clothing is not indicated as being obtained by the widow noted above, for example, though she is described as "decently-dressed". Whichever way these figures are viewed, however, it is still surprising that a widow and three children could get by on 5s6-1/2d plus a loaf of bread in the mid-C19. Further, the fact the widow could rent three rooms and had them furnished, albeit spartanly, with a variety of items is in strong contrast to descriptions of housing in the same area 33 years later, when one- and two-room hovels almost destitute of any furnishings and at higher rents than that paid by the widow appear to have been standard, sometimes occupied by people who could not be interviewed because they had no clothes (see pp 744-7 below). It would be instructive to have cost-of-living figures for Bristol for the mid- and later C19 for comparison, both with each other and with figures for other cities. In any event, however, it is clear thet even at its zenith in mid-century the Bristol pipemaking industry offered its employees a sub-living wage for a weekly grind of hard physical work and long hours and then only when work was available.

The reporter's account of the housing typical of the area has already been quoted, and more specific descriptions are not wanting. For example, in a street not far from the then newly-opened church of St Jude one in a row of several dilapidated tenements had partially collapsed, leaving only the lower walls. The ground-floor rooms had been used initially as an ash-heap, but subsequently had been cleared to make the former front room a sty for a couple of pigs and the rear a stable for a horse. According to the reporter, the property was apparently in chancery and much of what was in similar ruinous condition in the area had been similarly tied up for a lengthy period (Letter I). The presence of farm animals in the area was not unusual, to judge by subsequent observations by the same reporter: in his second letter he noted that where there was a backyard or the remnant of a back-garden a pony or donkey was very frequently accommodated - often having to pass through the house to reach the back - and some dwellings had cattle-yards behind them, the reporter noting he had observed two beasts gazing through an open window into a home. This feature of slum life last century was not confined to Bristol - pigs, sheep, cows, and other livestock were still being slowly cleared from London slums in the 1870s and as late as 1892 it could be recorded in a riverside parish there that donkeys, goats, and chickens had as free a run of some of the houses by night as they had of the streets by day (Dyos 1967: 25-6; Dyos and Reeder 1973: 364). The frequency of ponies or donkeys in St Jude's was because many inhabitants carted sand or junk (see below); the cattle were probably for the butchers and slaughterers noted in the area (Letters I and III), these occupations no doubt being associated with those of tanning and glue-making along the Frome noted earlier, though perhaps some supplied milk.

Few of the houses, the reporter observed in his second letter, had more than five or six rooms; many had less, and "in a very large proportion of instances" each room was the home of a family, though in some cases two or three families shared a single room. He had heard, he continued, of as many as 40 people "of both sexes and all ages" in one average-sized house. Windows with their full complement of glass, he noted in his first letter, were the exception rather than the rule, and where broken windows were not left in that state rags, paper, wood, or pasteboard were used to block the gaps. Some occupied premises did not even have a window-frame surviving. Where glazed, windows were of small panes of rough green glass, semi-opaque even before they had acquired their accumulated grime.

As already noted, the widow pipemaker was paying 1s6d weekly in rent for her three small rooms, a sum which had been 1s9d before her husband's death. Nearby a cork-cutter's wife and youngest child - a boy of about four - lived in a single third-storey room for which she had originally paid 10d a week, though now reduced to 9d (Letter II). Furniture comprised a small table, a chair, two wooden stools, a coloured coverlet, an earthen pan, a saucepan, a small piece of old sheet iron for a fender, and the worn remains of a poker. Neither ornaments nor food were to be seen, and the reporter suspected neither wife nor child had eaten since the previous morning. Bread when they could obtain it, was almost their only food; the children sometimes had a few potatoes, but meat was entirely unknown. Bread was 4-1/2d a quartern, but when she could the mother bought a peck of flour and made bread, thereby saving cost although she had to pay 4d for the baking. There was no bed and the woman apparently slept on the floor, a small bundle of ragged old carpet there probably serving as a pillow. The floor had holes through which rafters and dust could be seen, but the room and its occupants were decent and clean. The husband apparently travelled much of southern England looking for work, having been in London and Southampton, and sent home money at irregular intervals; he had with him the eldest child, a boy of ten. The wife worked sporadically as a needlewoman; lately she had made two check shirts for a neighbour and been paid 9d each for them. Had she made them for a slop-shop she would have been paid 1-1/2d each, and for tolerably good white shirts she would have been paid 2-1/2d each. As only four could be made a day weekly earning seldom came to more than 3s and often were less. Out of this she had to buy her own candles and thread. A deposit of 2s-3s was required by the shop as security for goods handed out, and as only a few could afford this sum these few received the order and in turn farmed out work to those unable to find the money, the work thus being sub-subcontracted.

In his third letter, the reporter described a family of seven living by day in a room about 6 ft by 7 ft and at night in a garret. There was scarcely an article of furniture in either room, and there were no beds. The father and the two sons old enough to work did so when they could as well-sinkers and masons' labourers but rarely had more than two days' work in the week and very frequently less, the increasing use of piped water having greatly decreased the need for wells. Unfortunately no rent is stated for their rooms.

In describing life in Bethnal Green, Townsend noted "attachment to flowers and pets is almost universal" (1957: 22, 1963 ed), and the Examiner's correspondent noted the same in St Jude's in his first letter. He noted many of the dwellings had a few plants in flowerpots, pans, or boxes on window-sills or within windows. The scarlet runner-bean appeared to be a favourite, fuschia, geraniums, nasturtiums, and marigolds also being noted, though few were in flower. Many of the houses had a birdcage hung outside, occupied by a blackbird or thrush.

Regarding employment in the area, the reporter offered a number of general observations and several specific examples. The area had, he said in this third letter,

> many industrious, sober, decent, therefore respectable, inhabitants; but to a very great extent, it seems to form one vast, repulsive refuge for the destitute - for the rejected of other localities, which, though poor, yet gain in comparison with this....there is hardly a man among those of whom I have spoken, that would not gladly work if he could find an employer; and as to a population being vicious, or badly inclined, the main cause of that, it would seem, and we may fully believe, are, in great measure, removable.

In his first letter, he noted

> The population appears to consist, in a very great degree, of persons who, being unable to obtain regular employment of any kind, and thus compelled to tax their ingenuity to find the means of keeping body and soul together, have either taken up some petty branch of industry, in which the material cost little, and for whose products here is, to a certain extent, a constant demand; or they are traders on a small scale, hawking their wares about the streets, or displaying them in the window of the common livingroom of their dwelling, and so make a pretence of shopkeeping; or, lastly, they have hit

> upon some temporarily successful mode of cloaking their real occupation, - that of beggars. There are, moreover, two or three small manufactures carried on in the vicinity, of a kind to allow a portion of the work to be performed by the operatives at their own hime, and some small number thus find bread....many obtain work occasionally, or sally forth at early morning and all day traverse the streets, the quays, and markets, ready to perform whatever chance task or office may fall their way, and by which they can earn a few pence, or even a morsel of bread. Pilferers no doubt there are, but the number [someone had alleged three-quarters of the population never ate before they had pilfered for their meal] has probably been greatly overstated.

Work in the area, however, appears to have been predominantly done by the women and children, again according to the first letter, many of the men spending hours or days lounging in groups at street corners or sitting on the pavement with their back to the wall "silently contemplating the other side of the street". Occasionally they would sing, or if a pack of cards, a piece of chalk, and some coins were available, play cards, generally using a cellar trapdoor as the playing surface. This appears to be different from what Booth found in East London ca.40 years later, for he noted that "As a rule the wives do not work, but the children all do: the boys commonly following their father (as is everywhere the case above the lowest classes), the girls taking to local trades, or going out to service" (quoted in Townsend 1957: 162, 1963 ed). However, in the northern Kensington Potteries by the end of the C19 there was a rather similar situation to that in St Jude's, laundry-work having replaced pig-keeping and potting to such a degree as the dominant occupation of the area that "laundress's husband" had become virtually a recognized occupation with some men of the area. (In this case it was the increasing middle-class housing in the surrounding areas which generated the growing demand for laundry-work, as it also probably created a market for female servants. The pottery and brick industry had begun to decline after 1860 as the brickfields became exhausted and the land taken over for housing development, while pig-breeding had been largely suppressed in the early 1870s after a prolonged campaign by the health authorities. However, the loss of these two predominantly male occupations does not entirely explain the later tendency for men to rely on the earnings of their wives or companions while doing little or nothing themselves, for there was much housing development in west London requiring builders' labourers, there was railway construction, goods yards, and other industrial work available west of the Potteries, and in the Potteries itself the erection of stables and a smithy in 1882 by the London General Omnibus Company offered plentiful employment (Malcolmson 1970: 53-67 and *passim*). However, it is possible there were not enough steady male occupations *within* the Potteries and their immediately surrounding area for a population with a large percentage of unskilled manual labour - almost 40% in the 1851 and 1861 censuses - and that the farther afield employment as an unskilled labourer was sought the more one was in areas with their own pool of unskilled labour. This may have been the case in St Jude's, where there is evidence (see below) that it was the lack of a trade or skill which made it difficult to find a better job.)

Girls in St Jude's did take to local trades at least as far as they were available, becoming pipemakers or producing kindling-wood, which latter appears to have been a major occupation or perhaps the most remunerative in the area (see below), and some did go into service, for the two elder daughters of the widow pipemaker are noted thus; but presumably a lack of traditionally male jobs, or more accurately a lack of employment paying male wages, and an over-abundance of unskilled manual labour kept much of the male population out of permanent work. In the second letter, a man who carted sand from Easton when asked why he did not look for more remunerative work, said his father had died young and as a result he, the son, had never been trained to any recognised craft or labour, and so could not get employment. A young woman pipemaker, when asked why she did not find a better job, gave a similar answer.

As noted above, the production of kindling was one of the staple occupations of the area (pipemaking was described as the other). Refuse from timber-yards, woodwork from old houses, soapboxes, sugarboxes, and the like were converted, sometimes indoors but mostly in the street and sometimes in several houses in succession. Men, the reporter noted in his first letter, were seldom seen doing this work; a woman with a billhook reduced the wood to proper size for sawing, which was done by children, mostly girls often under seven or eight. These pieces were then chopped into fragments by the children with the billhook, the sticks being taken into the house and made up in bundles. These were heaped in baskets and carried out on the heads of young women, either members of the family or ones employed to hawk the wood, the latter receiving 3d or more usually 2d for every 1s-worth sold. A basketful comprised nearly 100 bundles, which represented about a 1s-worth; sales were very variable, sometimes up to four basketsful being sold, sometimes none. The reporter observed that from the number of people engaged in this industry it could be considered the most remunerative of the poor's occupations, but that the competition in every sort of labour was so great the difference of profit among any of them must be very small.

Another occupation in the area, though a minor one, was the production of matchboxes, there being a wholesale dealer in the vicinity (Letter III). The existence of this trade in St Jude's is interesting because the wood used to manufacture the boxes was sent from London in old sugar-hogsheads or cases ready to be made up. It was delivered to those engaged in the manufacture - who were a few women and girls - in bundles of square pieces the proper size for the upper and lower portions of the box. The pieces had been cut nearly through by machine at the correct length so that all the matchbox-maker had to do was paste on the paper cover and press the cut edges together, the paper retaining the sides and end in place. Wage for this work was 2d a gross and production was three or four gross a day, so a matchbox-maker might earn 3s-4s a week when work was available.

The reporter mentions briefly here selling matches, but it is difficult to decide if the matchboxes were for local use or if the wholesale dealer referred to earlier sent the products back to London. The latter would imply considerably lower labour costs in Bristol to make it profitable to send semi-prepared material from London and then return the finished product. Matchbox-making was a standard occupation among the London destitute as late as the 1890s (Keating 1971: 177-8): the hero of Morrison's A Child of the Jago and his mother and two year-old sister make matchboxes - when they can get this much sought-after work - while the father is doing five years' porridge for burglary; and one of Townsend's Bethnal Green informants, who was 65 at the time of the interview in 1955, recalled her mother, herself, and others of the large family earning 2s3 3/4d for seven gross (Townsend 1957: 269, 1963 ed). Morrison describes matchbox-making as the most profitable work the temporarily fatherless Perrott family could expect to find: Mrs Perrott was a poor needlewoman, or she could have earned 1s a day, minus the cost of needles and thread, making shirts 16 hours a day; sack-making could bring in 1s7d per 100 sacks, a total that might be reached in four days "with speed and long hours"; and rush bag-making brought in more; but matchbox-making was the best work of all, for 144 outside cases and their paper label and sandpaper and the same number of trays to slide into them brought in 2-1/4d - for a special-size box it brought in 2-1/2d - and there were no overheads save for the cost of the paste and the string for tying up the boxes in batches and the time in fetching the work and taking it back, for the wood and labels and sandpaper were all supplied. Seven gross boxes could be made in a day if the maker worked long enough, so that a day's income would be 1s3 3/4d - as Townsend's informant remembered - minus the cost of the paste and string. The work, however, was difficult to get, the manufacturers complaining that people were buying Swedish matches (Morrison 1896: 206-9).

As noted earlier, many of the inhabitants kept a pony or donkey, which they used in the carting trade, either for junk or more commonly for sand. The latter, the correspondent noted in his second letter, was bought from pits at Easton and carried all over the city and suburbs, St Jude's apparently being the centre for this trade. The carter interviewed (see above), who had been in the trade since a boy, said his returns were enough to cover all his expenses, including the keep of his animal, and give him an average of ca.8s a week the year round. On this sum he brought up his family creditably, sending the younger children to school, and was said by others to be able to occasionally help those less fortunate to himself; he was, in the opinion of the reporter, exceptional, for the latter had observed many carter's animals had a habit of stopping outside public houses "from which circumstance a tolerably safe inference as to the whereabouts of their masters at such times, may perhaps be hazarded."

The junk trade was carried out by "A prodigious number of persons calling themselves 'Dealers in Marine Stores,' - that is to say, in everything dirty and detestable, and a heterogeneous mass of materials in addition". These stores comprised the lower rooms of dwellings, the windows stuffed full of material culled from gutters, ashpits, and scavenger's carts. There was, the reporter observed, hardly a street in the area without two to half-a-dozen such shops, all displaying large bills offering best prices for material and particularly for "rags, bones, bottles, junk, 104 old iron, copper, and every description of metal". Many of the dealers went 20 or 30 miles into the country for days with carts of crockery exchanging it for household rubbish, and children had rounds in the city and the country collecting material for which the dealer often paid them, if the amount was too small for cash, with lollypops. When sufficient material had been collected it was taken to wholesale dealers, though not before each piece had been inspected for items of further use - nails, for example, were removed from anything which held them. The tallow-chandling trade obtained appreciable amounts of raw material from such collectors, some of the old nails went to gunsmiths, rags and rope went to papermaking, bones were ground up for manure or cut into buttons or burnt to make lampblack or ivory-black, and iron was sent north by the shipload. The old rope went mostly for brown paper; one particular type, the flat rope of a mine-bucket, was said to form the strongest thin paper in existence, and was used for banknotes.

The work of the needlewoman and the slop-shop has already been described; another local occupation was butchering (cf above), carried out in the usual insanitary, smelly, and dehumanizing ways of the times (Letter III). The meat left the district two or three times weekly, some going to make Bologna sausages, some being sent to London. This type of occupation in C19 slums was not restricted to Bristol: Malcolmson (1970: 67-8) notes that a major occupation in the Potteries in northern Kensington in the middle of last century was pig-breeding, the pigs being fed on middle-class swill collected by the breeders from the homes of the well-to-do in the surrounding areas, slaughtered in the Potteries - at one time there were five licenced slaughter-houses there - and the bacon sold to the middle-class neighbours. Cowsheds in the Potteries suggest beef and dairy-products were also produced there for the same market.

The reporter also notes in his third letter that "A few travelling tinkers, and persons attending the neighbouring fairs with nuts or gingerbread are said to have some sort of habitation hereabout....": this suggests traditions like the "Horn Fair" in Wade St in the early C19 noted earlier may still have been held (in the early C19 it was held on Boxing Day, and as there is no evidence the Examiners's correspondent made any in-depth study of the area but simply recorded what he saw and felt in August and September of 1850, annual institutions of this kind would have gone unrecorded).

Even apart from the junk shops, however, there was according to the reporter a prodigious number of shops in the area, an observation which is fully in accord with trade directory evidence for St Jude's in the C19. The lower rooms of two houses out of three, and often of three or four in succession, would offer a collection of garden produce, items such as sticks and whiting (this last no doubt supplied by pipemakers), and sometimes a red herring or a dish of perriwinkles. Everyone, the correspondent observed, seemed to have something to sell though numbers complained they could hardly afford a morsel of bread; the amount of food displayed, however, was hardly more than might make a labourer's meal. There were a few meat-seller's shops, but they displayed little save on Saturday nights and even then the meat was small and of the coarsest kind (cf account of widow pipemaker above). However, it was noted the spectrum of shops was decidedly limited - "The list of what shops there are not, hereabout, would be a long one;..." - there being for example no chemist or bookseller (there was a small-scale establishment approximating the former on the outskirts of the area, but its goods were apparently restricted to Genuine Bear's Grease and highly-scented

Pomatum at 1d a pot).

Commenting on places of worship in his fifth letter (14 September), the reporter noted three or four churches and a similar number of chapels "of considerable size" within a half-mile or a little more of the centre of the area. His observations, however, were that an exceedingly small minority availed themselves, even irregularly, of these establishments and of those who did few were Anglicans. Such an observation would certainly agree with other C19 evidence (cf 4: VI).

St Jude's, he noted, had recently been erected - the foundation-stone had been laid on 7 August 1848 and the church consecrated and opened in June 1849 (Anonymous 1906 ed: 84) - and was open daily for morning and evening worship. Having overheard one labouring-class man say to another that the church was "a nice place, and a pity it's got no custom", the reporter visited it twice. The first was for a Saturday evening service, at which there were three choirboys and a congregation of seven, three or four of whom were local labouring-class inhabitants; the other was the following Sunday morning when there were 6 or 7 choiristers and a congregation of ca.70. He judged the church, which had a gallery at one end, to hold ca.700-850; the 1883 OS plan - FIG 174 - however, indicates a seating of only 350.

The church interior was described as being excessively plain save for the chancel, which was entirely the opposite, with an encaustic-tiled floor, a bright blue ceiling powdered with golden stars, fretted niches in the side-walls apparently for the clergy, and a sumptuously-clothed three-tiered altar, the whole being cut off by a massive wooden screen which effectively obstured most of the ritual from the congregation. Lighting was by gas.

The whole internal arrangement, it was noted with strong disapproval, was Anglo-Roman, differing in no degree from "what is observable in certain edificies recently erected by papists in this country for the celebration of what they believe to be religious worship". The Sunday sermon was apparently no better, being on the efficacy of prayer and "touched no debatable point of doctrine - such a discourse in fact as either Protestant or Papist might deliver". After the final prayer a chorister came forward immediately to close the doors of the screen "and so keep the curious at bay".

From all this, the reporter concluded, it was no surprise to find the church's ministry had so far made small impression on the district, if indeed, he suggested, its ministrations were calculated to have any benefit at any time. Outside the church services, it appears the clergy gave immediate attention to calls from the sick, as also did clergy of certain dissenting bodies who held occasional prayer-meetings in the street;

> but beyond this it does not appear that anything calculated to promote the advancement or extend the influence of religion among the people is attempted, and it must be admitted that the contemplation of any such attempt is met by the very greatest discouragement.

These comments probably do less than justice to work being done in the area by the BCM and the Friends, but as Inglis notes (1963: *passim*) attempts to reach the working classes by any of the major and conventional religious groups was much more a feature of the second half of the C19 - in other words, after the time of the Examiner's reporter - than of the first half. Further, the reporter was writing at a time when the Roman hierarchy had been restored in England and Cardinal Wiseman and Pius IX were talking of crusades to reconvert England, and when major Irish immigration following the potato famine of the late 1840s was to make for the first time in modern England a significant number of Roman Catholics (cf Inglis 1963: chapt 3), hence his fear, shared by many others in the C19, of ultimate Roman domination.

One religious group, however, which the reporter observed in the same letter certainly had influence in the area, was the Mormons; and there follows an extended fulmination about Mormonism and its more obvious errors in historical beliefs. This diatribe has to be set against Mormonism's spectacular success in the late 1830s and in the 1840s in industrial areas of England (E.P. Thompson 1963: 882, 429 n.1, 1968 ed.) Unfortunately, the account tells us nothing about Mormon activities in St Jude's beyond its apparent popularity, though in the seventh letter (28 September) there is a reference to a Mormon chapel in "St Philip's" - whether in the out- or in-parish is not indicated.

Though the concluding part of the seventh letter deals with education, the comments made are all entirely general. The correspondent was enthusiastically in favour of improved educational facilities, and public libraries and museums, citing an act of August 1850 replacing an earlier one and allowing any municipal borough with a population over 10,000 to set up the latter establishments if it wished, the costs to come from a rate of no more than 1/2d in the pound. His motives were not, however, entirely altruistic, for he was convinced lack of education was "evinced by the mental condition of the masses, young and old, and by members of them being found ready to become Socialists, Mormons, or what not, as one delusion after another is presented to their notice". With education, he ended the letter in purple tones, and

> our working-classes well informed and steady, I do not see what is to hinder us from setting The Pope and the Mormons at defiance, and counteracting all their schemes for the subversion of our faith, the destruction of our peace and freedom, and the ruin of every well-ordered and useful instituion in the country.

There were schools in the area, for the sand-carter noted earlier earning ca.8s a week sent his younger children to one, and the needle-woman wife of the corkcutter noted above sent her two eldest children to the Hannah More schools at Lawford's Gate, but as there was a charge of 1d a week per pupil was unable to send her third child. Even at that she was sometimes unable to pay for the other two every Monday, at which time the children, otherwise willing to go to school, were reluctant to go because defaulters' names were called out by the teacher. (Hannah More, the Bristol teacher, author, and social and religious worker, died 1833 aged 88 and left, after many charitable bequests, the residue of her estate to Holy Trinity Church, St Philip and Jacob Out-parish. A number of parochial schools were erected in this neighbourhood by subscription 1833-39 in her memory (Latimer 1887: 198-9); no doubt it was to these the two children went.)

By the end of the C19 the St Jude's area was famous, or infamous, for its common lodging-houses (see below). These were clearly in existence before 1850, for in his third letter the Examiner's correspondent noted that "The so-called 'lodging-houses' of St Philip's, have frequently been made the subject of remark, and of censure". Here again, the Examiner's interest was topical, for Samuel has noted that about the mid-C19 common lodging-houses were the subject of much anxious examination, there being "few towns without a street or two largely given over to them" (Samuel 1973: 127). Generally, the Examiner's correspondent noted, 2d or 3d a night was charged for lodging, with no questions asked. The houses were seldom large and the number of rooms few, resulting in "the most intolerable overcrowding of the apartments, and the destruction of all regard for morality, or even decency, arising from the stowage of both sexes and all ages together"; dried herrings, he remarked, were better packed in their own barrels, being at least packed by size and laid in one direction. Visits from city missionaries and government inspectors had made some improvement, but there was urgent need of much more.

Thirty-three years later another Bristol paper, the Bristol Mercury and Daily Post sent their "Special Commissioner" to look at Bristol slums, and the following year his columns appeared in book form (Anonymous 1884). Chapters III to V deal with St Jude's, and their titles, entitled "Cells above Ground in St Jude's", "Working Women in St Jude's", and "Waifs and Wanderers in St Jude's", give an accurate enough indication of their contents. This series is more detailed and stark than that in the Examiner, and one's credulity is strained, in the light of the descriptions, by the remark made more than once that things had become better in recent years: accounts of women and children who could not be interviewed because they had no clothes, or who had to be covered with fragments of carpets before being presentable (pp17, 20, 26), were not noted by the Examiner's correspondent.

The worst parts of St Jude's, with the highest proportion of one-room dwellings were New, Pinnel, Gt Ann, and Wade Sts, together with Brick St on the opposite side of Lamb St from Wade St (p.17). New St in particular had some of the worst courts (p.29). This agrees with other evidence noted earlier regarding the New St-Pinnel St-Gt Ann St area being one of courts and heavy occupation from early times. Gt George St, by contrast, was regarded locally as aristocratic, with a greater proportion of people in regular employment, and people there felt they were falling in the social scale if they had to move to adjoining streets (p.17). The George pipemaking family sold their Gt Ann St property in 1873 (to one Curry who sold it to the BCM in 1875) and moved to the Gt George St property they had taken over two years earlier from pipemaker Thomas Roberts II who had been there since 1866, which suggests that despite the folding of the pipemaking industry in the 1860s the Georges were well enough off to move to a better street - as noted in Section VI above, the family were also local landlords. (James George I, son of Thomas George I the founder of the business who had bought the Gt Ann St property in 1810, died in 1873 aged 86; possibly he had held on to the family home and on his death his family hastened to remove themselves from an area whose social position had deteriorated since their grandfather's time.)

Access to and from St Jude's had been improved shortly before 1883 by the removal of Bull Paunch Lane, described as "the home of dog fanciers, the prize fighters and their trainers, cag-mag butchers and loafers" and the building on its line of Lawford St, which had

> swept away many a vile rookery and den of filth, and let in a wholesome current of air into streets, in passing through which one was glad to hold his [sic] breath or keep a handkerchief to his mouth to escape the noxious fumes of vitiated air issuing from every court and alley and passage.

Mission work, night schools for adults and children, a creche for infants, and other philanthropic enterprises had done something to improve the area from its earlier reputation, the reporter said, and there had been a "decided dimunution" of crime compared to times past. Perhaps he was thinking here of the fatal stabbing in the "Three Horse Shoes" in Gloucester Lane of PC Richard Hill in 1869, an incident which drew tens of thousands to the funeral and passed into popular Bristol legend (e.g. Bristol Evening Post 6 October 1969, "Last Tribute to P.C. 273"; cf Winstone 1970b: pl 104). A contemporary journal described Gloucester Lane as "a place of unsavoury repute, notorious as a den of tramps [a reference to its common lodging-houses, see below] and one of the worst districts in the East end of the city" (quoted in Evening Post article). The suppression of prize-fighting had stopped the all-night orgies which had often preceded these fights (held in the morning), one publican in the area, since retired on a fortune, being said to have frequently taken in £6-£7 in the small hours of the morning on such occasions. It was also said by local inhabitants that "the reasonable restriction of the hours of opening of the lowest class of taverns" had had a more civilized influence than anything else in the area (p.16).

There had been, it was averred - rather incredibly in view of the accounts which follow - "some little diminution in overcrowding", though it was admitted the dwellings of the poor had undergone relatively little change. The British Workman erected in New St in 1874 as part of the New St Mission necessitated the demolition of several houses: out of one small room there were turned out a man, his wife, 4 children, and 14 fowls kept beneath the bed "where the accumulated filth and feculant matter were more than a foot deep"; in another room an old man and woman slept on sacks; in another they kept their donkey (cf remarks in the Examiner); and in a fourth, where the roof was in some places open to the sky, an old blind man slept on the bare boards (pp16-17). "We have improved a little on this", the reporter maintained.

The references (pp16, 17, 27) to "shed-dwellings" in backyards - old sheds and outbuildings plastered over - confirms earlier evidence that part of the slum conditions were caused by the prolification of building in what had originally been back-gardens or open courtyards behind properties; but common dwelling-houses appeared in the reporter's view to be the worst offenders. One property, including the stable at the back, was said to hold 18 families; another property to hold 10 (p.27). In 1871 the city had passed regulations empowering them to deal with houses or parts of houses let in lodgings or occupied by more than one family, but the whole of Bristol was covered by only two inspectors. Courts they were apparently able to deal with more easily, but common tenements were "the black spots of a neighbourhood". One such building in New St was let in single rooms - one was occupied by a man, his wife, five children, and one bed - and entered by a scullery which passed for the kitchen and whose floor was covered by stagnant water, vegetable refuse, and ashes. On this point the reporter took strong exception to a London paper's suggestion of the previous week that large communal dwellings for the very poor accomodating 1,300 people was the solution, noting that in St Jude's those who had managed to move from a tenement to even a two-roomed cottage shuddered at the thought of returning to the former (p.17).

In an unspecified court of two-room houses, each room 10ft by 6-8ft, the toilet in every house save one was in the living-room (p.20); the neighbourhood of Swan Ct, a narrow vennel running between Little Ann and Little George Sts along the SW side of the "Swan with Two Necks" (FIG 174), was an area with toilets in living-rooms (p.27).

In earlier times St Jude's properties had been mostly owned by absentee landlords, and a story was told of a Clifton gentleman who had regularly come in his carriage to three of these properties to collect his rents; but as dilapidation and difficulty in collecting rents had alike increased absentee landlords had become less common, and many of the properties were now owned by people living in the neighbourhood who had "become comparatively rich in trafficking in these sordid specimens of homes of the poor" (p.27). As noted earlier (p.556 above), the last Thomas George pipemaker was landlord of some of the dwellings in the area, though a granddaughter recalls him as being softhearted about collecting rent from his poorer tenants.

Rents appear to have ranged from ca.1s6d to 2s9d a week for two rooms; single rooms ran ca.1s to 2s. A three-room house is noted in Pinnel's Ct costing 2s3d a week. A one-room shanty 10 ft by 6 ft in a court off New St (presumably either River Ct or Burge's Ct) occupied by an old woman, her daughter, and a baby cost 1s; it had no furniture other than a sack bed on an iron bedstead, the walls were damp, and the floor was so wet that the occupants had to sit on pieces of basketwork. This was considered so bad that the guardians of the poor would not give the old woman relief unless she moved to a better place. Two-room backyard sheds of the type noted above, the rooms 8 ft by 7 ft, cost 2s2d a week. In a court off Pinnel St (presumably either Pinnel Ct or Burge's Place) where room after room was occupied by families, an out-of-work cattle-driver, his wife, and five children aged from 9 months to 14 years, paid 1s6d for a single top-storey room; one bedstead and some dirty bedding were their entire furnishings. In Gt Ann St, a man, wife, and their four children lived in a single room for which the rent was 1s9d a week; in Wade St a labourer, his wife, and three children lived in a tenement room costing 1s2d, though it was clean compared with houses surrounding it and even had a picture of a winter scene on the wall. In one court of single-room shanties with stable-doors the rooms were let at 2s6d a week for women in confinement. A room with "an apology for a bed", a bench for a table, two old chairs, some cracked crockery, and a greasy Merry Christmas inscription on the wall (in November) was let as "furnished" at 2s6d a week (cf 1865 description of an East London dockland home quoted in Jackson 1963: 113). An even worse "furnished" room, though not described in detail, cost 3s (pp18-20, 22, 23). Further similar accounts are not lacking in the reporter's survey, and the impression from the *Mercury and Daily Post* account is of appreciably worse conditions than those observed by the *Examiner*'s correspondent 33 years previously. In 1883 virtually nothing but one- and two-room dwellings are noted, and according to those working in the area there were 400-500 families in single rooms in St Jude's at that time (p.26).

The size of these families was often large, as examples indicated show, and the birth-rate for the area was as high as 42.1 per 1,000 (p.26). Unfortunately, neither death-rate nor population figures for the area are given. Few figures are available for rents in St Jude's in 1859, but those which are - 9d-10d for a single third-storey room and 1s6d-1s9d for three small rooms (see p. 736 above) - suggest rents had approximately doubled by 1883. Squalor certainly seems to have become worse between 1850 and 1883: the three-room home of the widow pipemaker described in the *Examiner* was said to be reasonably frnished for its locality, but when compared to accounts in the *Mercury and Daily Post* the description, to say nothing of the number of rooms, has become far better than average. If, as the 1883 account insists, conditions had really improved somewhat in the preceding years, it must have been because of increased relief work rather than any true amelioration. The increase in rents, like the increased overcrowding and squalor, may reflect increased demand for housing from a growing number of people living in poverty; as noted earlier, a comparison between Ashmead's 1828 plan (FIG 168) and the 1903 OS plan of the same scale (FIG 175) shows an appreciable increase of building density between these dates.[105] Social work particularly by Board School representatives, and also by individual persons, went some way to relieving individual cases of extreme hardship. One lady from Clifton had come to live in the area so as to be near her work (p.19), and this illustrates some interesting comments by Latimer. He notes (1887: 443-4) that in 1868 a "novel and interesting movement" was started by Dr John Percival, the headmaster of Clifton College: this was the founding of a ragged school in the St Philip's Marsh area with the teachers being senior pupils from the College. With the Education Act of 1870 the school was handed over to the School Board, and Percival offered to maintain a mission in any area of Bristol the Church Commissioners chose. The result was the founding in 1875 of a mission in Newfoundland Rd (on the opposite side of the Frome from St Jude's) which took a vigorous part in the social work of that area. The College's example was followed by some Clifton parishes, who established missions in the eastern parts of the city; and the lady noted above no doubt came to St Jude's as part of that inspiration. What is particularly interesting is that this movement took place well before the famous Toynbee Hall movement and others in East London from the earlier 1880s, where Oxford graduates went to live and work in the slums there (Inglis 1963: chapt 4). By 1887, the year Latimer was writing, there were at least 16 schools and colleges taking entire or partial responsibility for Church of England missions in working-class parts of London as well as the Clifton College mission in Bristol and those of Rossall in Manchester and Winchester at Portsmouth (Inglis 1963: 29); it may well be that the Clifton College mission was among the very earliest.

Either the above-mentioned lady or another from Clifton had been instrumental, about a year before, in forming the St Jude's Church Society, a comprehensive mission to the area run by members and friends of the congregation of St Mary's, Tyndall Park. A year previously, this lady had gone to see the home of a beggar boy she had apparently met in Clifton, become interested in the poor, and obtained a residence near them, the movement starting from this. The Society ran a day nursery with some 30 infants; a boys' night-school with nearly 50 attending; a men's night-school held in the Wade St National School (FIGS 174, 200) with sometimes as many as 86 attending; Bible classes for women with 150 attending and one for men with a membership of 54; young men's and women's Sunday classes; a work club employing 75 women in needlework, the goods being sold at a shop opened in the district; a working party of ladies making, collecting, and distributing clothing; and district visitors. The work was done by ladies from Clifton and Redland and medical men and other professional people took the evening classes after their day's work (p.25).

As with his predecessor from the Examiner 33 years before, the Mercury and Daily Post's reporter found it was the women and children who were often the real wage-earners in the family (pp18, 27-8), the men frequently being shiftless, or drunk, or simply not giving their wives more than a pittance even when earning a steady wage. Typical examples of Victorian cautionary and moralizing tales are included. Among them were a smith (p.26) who could earn 32s a week but drank, so that he, his wife, and five children lived in one room, and when visited the wife had to be covered with a piece of carpet before the reporter could visit there (this was in Gloucester Lane, on the opposite side of Lamb St from Wade St); the reform of drunk parents to establish a cheerful home and decently-clad family (pp22-3); a healthy, well-fed labourer earning 18s-21s a week but living in a ca.10ft-square room with almost no furniture, with six small children, and a wife nearly dead with overwork and underfeeding (pp21-3); a labourer who could earn 18s a week at the Quay but got little summer work nevertheless keeping his four children clean, his two roomed-cottage limewashed outside and wallpapered inside, full of furniture, with pictures on the wall, his wife joining with the wife of a similarly tidy labourer next door to buy and clean flour bags and convert them to underlinen and sheets, from which they also made their own clean bedding, the whole compared to their next-door neighbour, who despite earning 16s6d a week as a labourer, was living with his family in miserable squalor (p.18).

The reporter applauded "Working-man", who had written a letter to the Mercury and Daily Post after reading the articles on St Jude's, when he expressed his disbelief in indiscriminate almsgiving and urged the poor be found work, given better habitations, encouraged in thrift and sobriety, and educated; but rebuked him when he said he hoped the publicity now being given to the plight of the poor would "rouse the people to clamour for their rights, and our opulent classes to do all they can to uproot the upas tree" (p.21). The reporter also noted with approval comments made by Mr Fawcett the previous week at Reading, that deeply as he sympathized with the suffering disclosed

> I feel more strongly than I can express that all that is bad now will become intoleraly worse if anything is done to

> weaken the great and sacred principle of self-reliance, or if anything is done to encourage men to believe that they have the right or the power to throw upon others the cost of maintaining either themselves or the children they are responsible for bringing into the world (p.22).

It is easy to dismiss this as characteristic Victorian paternalism, but it was an outlook of others who had far more practical experience with the poor than had the Mercury and Daily Post reporter. Samuel Barnett, vicar of another St Jude's, in Whitechapel, and Warden of Toynbee Hall from 1884, declared classes must exist because

> A body in which every member is a hand could do no work, and a city of one class would have no life....Their unity [that of rich and poor classes] means strength, their division means ruin (Inglis 1963: 171, quoting S.A. and H.O. Barnett Towards Social Reform, 1909);

and on another occasion the Barnetts maintained

> Poverty is a relative term. The citizen whose cottage home, with its bright housewife and happy children, is a light in our land, is poor in comparison with some stately mansion. But his poverty is not an evil to be cured. It is a sign that life does not depend on possessions, and the existence of poor men alongside of rich, each of whom make [sic] up the society of the earthly paradise (Inglis loc. cit. quoting S.A. and H.O. Barnett Practicable Socialism, new series 1915)

and asserted what had to be cured was the poverty which degraded human nature and prevented the ordinary man enjoying the attributes with which he had been born. Elsewhere again, Canon Barnett recorded

> Universal experience goes to show that without a master the ordinary man does not work. It seems as if it were necessary that a man should be under authority (Inglis 172 quoting Commonwealth May 1896).

As Inglis says (loc. cit.), settlements such as Toynbee Hall were a late expression of the earlier belief that "the good society would be achieved by beneficient gestures from the leaders to the led"; socialist leaders such as George Lansbury,[106] like Barnett an Anglican, were bitter about this outlook (Inglis 172-3).

According to the Mercury and Daily Post's reporter, staple occupations in St Jude's were pipemaking, sack-turning and -darning, stick-chopping, clothes-washing, fancy-mat making, manufacturing whitening balls, and match-box making, all of which were done by the women of the area (p.23).

Sack-turning and -darning brought in 1s6d for six dozen, out of which thread had to be bought and railway carriage of 2s (from or to where it is not stated) paid (p.23); this was the occupation of the wives of two labourers noted aove, buying "American flour bags" from large flourmills at 2s3d a dozen, cleaning them, and selling them at 2-1/2d each to be made into underlinen and sheets (p.18).

Whitening was made in a pan, formed into balls, and baked over a cinder fire (p.22); its manufacture, as noted in 2: VII, was often a sideline of pipemaking. Pipemaking is only given the one passing mention: as noted above, the bottom had fallen out of the industry in Bristol in the earlier

1860s, and by 1883 only five businesses were listed in the directory. Of these five, four were in St Jude's and the fifth, Ring, was at Temple Back. The four St Jude's businesses were those of Thomas George of Gt George St, a Mrs George in New St (a relative of Thomas George, who earlier had also been at the New St premises), Thomas Roberts in Gt George St, and Sarah Williams in Lamb St. All three families were old-established pipemaking businesses which had managed to survive the crash of the 1860s; the earliest makers recorded in each family had each become free in 1812.[107]

Mr Frank Wyatt, father of the present landlord of the "Cherry Tree" in Pipe Lane at Temple Meads, lived in the St Jude's area as a youngster and recalls it at the turn of last century as a terribly run-down and generally seedy area, the pipemakers being all somewhat ill-kempt individuals who took their wares round the local pubs in large baskets (this must refer to journeymen makers; the proprietors of the businesses surviving in the area at this time - virtually only the George family and Thomas John Corcoran of the "Swan" - would have been a cut above their workmen). Mr Wyatt recalls a rhyme current at the time and apparently used by the pipemakers:

'Alf a pint of 'alf 'n' 'alf,
Please to blow the froth off;
'Alfpenny screw in a farthin' pipe,
Father'll pay thee Sa'urday night

(I owe this information to Dr Roger Price of Bristol City Museum, *in litt.* 1 August 1974). As noted earlier (p.171 n.26-), the "'alfpenny screw" refers to tobacco-dispensing machines which for a halfpenny gave a screw of tobacco and which were often in pubs of this period. As for the farthing pipe, Corcoran was advertising in 1892 "assorted cutties" (presumably wholesale) at 1s a gross (p.398 above) - that is, 1d a dozen - so a publican selling them at even 1/4d each was making a 200% profit assuming the transaction involved no overheads.

If pipemaking had declined since the *Examiner*'s correspondent had visited the area, the other major industry of the area to which he referred, the production of kindling, had not. However, "The keen competition in every branch of industry in these days" had deprived this trade of much of its supply of wood, sugar-casks and packing-cases from unloaded vessels in many instances being eagerly sought by handicraftsmen and turned into "gipsy tables" and ebonized and gilded or covered with silk and plush and gay fringe to adorn the rooms of the well-to-do (p.24). As with the *Examiner*'s correspondent, in nearly every case the *Mercury and Daily Post*'s reporter saw it was the women and children who did the chopping and bundling, though there was "one industrious man sawing away at some heavy timber for his wife to chop in the morning" (pp18, 19, 24); as also noted in the *Examiner*'s account, women in the area were employed to hawk the firewood (p.22), though no prices or wages are noted by the *Mercury and Daily Post*. Frank Wyatt recalls earning a few coppers chopping and bundling wood at the turn of last century for the pipemakers to use in their kilns (presumably as kindling; the kilns must have been coal-fired).

The other staple industry in St Jude's in 1883 appears to have been producing matchboxes. As noted earlier, this occupation was described among those of the area in the *Examiner*, but at that time was said to be a minor business. According to the *Mercury and Daily Post* account the woman making Elfin matchboxes (the brand name of the matches) were paid 2d a gross "binding them up in bundles of three dozen, finding their own string and flour for pasting on the ornamental paper and the picture of an aerial sprite winging its way through the clouds". Thus, even if a woman made as many as 20 gross (2880) boxes a week she could earn only 3s4d - and out of this she had to buy her string and flour. These figures indicate there had been no change in wages since the Examiner account of 23 years before, for there also 2d a gross was the pay-rate and 3s-4s the weekly wage. As noted when discussing the Examiner's evidence, the pay ca.1900 of East London matchbox makers was 2-1/4d a gross.

Other occupations noted included manufacturing wooden butcher's skewers, at which occupation a man in a top room in a court off Little Ann St supported his wife and four children, being paid 1s3d a thousand skewers, out of which he had to find his own wood (p.18); making gaily-coloured toy balloons from bladders, which was one woman's way of attempting to keep herself and two children (p.20); and the producing sweets on a grimy bench in a dingy room in a court off New St, from where they are hawked on the streets by the man and his wife (p.29).

Some extreme cases of exploiting child labour were recorded. A nine-year old boy, for example, was dressed as a negro minstrel by his foster-parents and taken round as many as 40 public houses a night earning money by singing, the foster-parents waiting outside to take the money from him. In this manner he averaged 3s6d a night and 5s on Saturday nights, an indication of how valuable a source of revenue such children could be. The School Board officer was diligent in tracking down such children and obtaining detention orders for them to be sent to schools, but frequently the parents took the child away and disappeared from the area for a fresh field to work. In other instances children were sent to meet the cattle-boats and work in the cattle-market every Thursday and were sometimes up all night, and half the average attendance at the River St Board School was known to sell articles in the streets at night - children of five and six were noted out to 10 or 11 at night even in winter (the reporter commended the new regulations recently formulated by the Watch Committee and approved by the Home Secretary, that all children under eight were to be prohibited from street-selling and those under thirteen limited to 9 in the evening April-October and 8 in October-April) (pp27-8).

In 1850, the Examiner's correspondent had made only the briefest reference to remedial work in St Jude's, and that à propos of the area's common lodging-houses where he said visits by city missionaries and government inspectors had effected some improvement though there was urgent need of more. By 1883, however, there were a number of societies active in the St Jude's area. Apart from the St Jude's Church Society whose work is described above, there was the BCM's Gt Ann St Mission noted earlier and described by the Mercury and Daily Post correspondent as doing "a grand work". Initially, the BCM was said to have begun with cleanliness first and later godliness, the verminous children being washed and having their hair cut before joining the Mission's night-school. In winter there were 160 girls and 100 boys attending the weekly night-school, there were Bible-classes for all ages, visits to the poor who were taught in their own rooms, and services in the Mission Room (p.31).

The Bristol District Nurses' Society was active seeking out cases of illness among poverty-stricken families; and the Red, White, and Blue Ribbon Gospel Temperance Army working from the Pennywell Rd Mission Hall helped many families, ran a children's Sunday School, and held services all run by working men in the common lodging-house kitchens. Stapelton Rd Congregational Church, itself in a working-class area, ran the Brick St Mission (FIG 163), a Clifton gentleman having helped them ca.1873 purchase two of the slum tenements on the street to convert into the mission building. This Mission did relief work, supplied clothing, and gave religious instruction (p.31). Elsewhere (p.30) it was noted the Mission had sent an elderly woman of the area on a trip to Weston-super-Mare, to her great enjoyment.

There was also the New St Mission, noted earlier as started in 1866[108] by Friends converting their Poorhouse in New St. Their Schoolroom (presumably in the former Poorhouse) subsequently became a Board School, but in 1868 they founded a ragged school, and a British Workman, as mentioned earlier, was opened in New St in 1874. A Friends' Mission's "Thieves' Tea" at Major Tireman's chapel in Unity St in 1865 was also noted above, and indicates interest in social work in the general area even before the New St Mission was started. The latter held religious services and ran Sunday schools, Bible classes, and mothers' meetings (p.31).

Like the Examiner's correspondent, the Mercury and Daily Post reporter commented on the common lodging-houses of the area. There were, he said, ca.30 of these places in St Jude's holding from 10 to 70-80 persons a night. They were apparently much different by 1883 from what they had been formerly when there had been fewer restrictions on sleeping accommodation and mixing of sexes in the case of single people; and the various gipsy kitchens, thieves' retreats, beggars' homes, and kitchens for "tramps and 'travellers', with secret signs and codes little understood by the outer world of respectability" had largely disappeared. The best lodging-houses were places of "luxury and cheerfulness" compared to many of the dwellings in St Jude's, their kitchens well lit with gas and well heated by a blazing fire three or four feet across, their dormitories with 20 beds to a room thoroughly clean and well ventilated. Fried chitterlings, pork cuttings, black puddings, red herrings, sprats, bloaters, liver and bacon, steak and onions, were all listed among the foods brought in by the lodging-house inhabitants, suggesting some of them lived appreciably better than many others in St Jude's. The usual array of inhabitants occurred in such places - "Men of education, who have graduated at Oxford, ministers, ex-scripture readers, schoolmasters, town councillors from distant places" were all to be found (pp30-1). This description suggests an improvement in lodging-house conditions since the Examiner's reporter had observed them in 1850, but the Mercury and Daily Post writer may have painted an over-rosy picture of lodging-house life (cf below). However, as Samuel points out (1973: 127-8), even hostile observers sometimes had to admit the atmosphere was sociable: companionship, a need too often not realized by social reformers (Young and Willmott 1957: 198-9, 1962 ed; T. Cullen 1965: 244-5, 1966 ed), and warmth were there - accounts always seem to mention a roaring fire - and "ale, porter, porridge, beefsteaks, cow-paunch &c.," were noted as the food in an account of an Ashton-under-Lyme lodging-house in 1844 (quoted in Samuel 1973: 128). Prices ranged from 1d to 3d a night in the mid-C19 according to Samuel (loc. cit.), and from 4d to 6d later in the century, so the prices charged in Bristol lodging-houses - 2d or 3d a night in 1850 (see p. 744 above) and 2d for half a bed or 4d or 5d for a whole bed in 1906 (see p.754 below) - appear to have been typical for their time. However, Samuel notes that even these prices were expensive for poorer travellers, who used the lodging-houses only when they were flush and Casual Wards and Refugees, which were free, when they were out of money.

Neither the Examiner nor the Mercury and Daily Post accounts of Bristol slum life can be compared to the major surveys of London slums and poverty appearing about the same times - Beames and Mayhew ca.1850, for example, and Booth in the 1890s - but aside from their purely local interest they indicate that the increasing concern about working-class conditions by the mid-C19 was country-wide and that Bristol was by no means behind in this awareness. Indeed as noted earlier, the BCM was founded in 1826, nine years before the London City Mission, and is possibly the oldest city mission in the country; and Clifton College had started a mission working in various east Bristol slums in 1868, long before the famous university missions in East London were started in the 1880s. Again as noted above, Bristol Friends were active in social work at least by the mid-1860s, contrary apparently to the general run of C19 Friends' societies. There is ample evidence to suggest an examination of Bristol social and mission work in the C19 would yield rich and unexpected information: such work is almost invariably thought of as London-oriented, and specifically - at any rate from the 1880s - East London, probably because of the famous studies by Mayhew and Booth and other writers and because of the Salvation Army and Jack the Ripper. Keating (1973: 585) quotes Walter Besant talking to a Birmingham audience in 1884 on "Art and the People" and beginning

> As regards Birmingham, Manchester, Sheffield, Glasgow, and any other places where there is a great industrial population, I know nothing. If, therefore, exception be taken to any expressions of mine as applied to some other city, I beg it to be remembered that East London alone is in my mind.

By the time Besant was writing, this was a perfectly understandable view, for East London had become the symbol of urban poverty and, as Keating says, "the natural, virtually inevitable, point of reference for anyone wishing to place the urban working classes". Even in Victorian fiction, with the exception of a brief period in the late 1840s when Manchester was the setting for stories of industrial conditions, London was the usual setting for stories depicting social problems, with Besant himself responsible for the "discovery" of the East End from 1882 (Keating 1971: 17, 105, 93, and passim). As noted earlier, the BCM's minutes of meetings are available, and records of other missions, either in the form of separate records or in the records of parent organizaions such as Clifton College and various churches no doubt also survive; the collections of Friends' records (Mortimer 1967: 22; 1971: x-xvi) probably include information on their New St and other Missions, and the St Jude's area property-deeds no doubt have relevant information.

Subsequent contemporary accounts of St Jude's are few and generalized. A January 1903 issue of The New Penny Magazine included a brief article contrasting St Jude's and Clifton by "Our Special Commissioner". This article, as noted earlier, is useful chiefly for two illustrations of Gt George St and one of Grace's Ct off Gt George St (FIGS 170, 193-4); but there are also comments which suggest there had been little change in the area from earlier accounts. Stables for donkeys or ponies are noted in backyards the only entrance to which for man or beast is through a passage in the house, which harks back to the Examiner remarks in 1850 and suggests the carrying trade was still a St Jude's occupation; and there was frequent evidence of wood-chopping still being another occupation - again, it was noted as a woman's job, and children being sent out to sell it. The letting of rooms was still universal in the area, occupiers being said to be "hawkers, dock-labourers, and others". A furnished room cost less than 8d a night, typical furniture comprising a bed, table, two chairs, and a lamp, with sometimes a few pots and pans. Gt Ann St had a number of signs "Good Accomodation for Travellers", but Gloucester Lane was the major centre for vagrants' hostels; and the Glouceser Lane district (on the opposite side of Lamb St from Wade St) was said to be the principal Bristol slum (Anonymous 1903: 448-50).

Arrowsmith's Dictionary of Bristol (2nd ed 1906) describing the common lodging-houses, noted they occurred particularly in Gloucester Lane, Lamb St, and Gt Ann St, and suggests conditions less pleasant than those described in the Mercury and Daily Post in 1883. The charge for half a bed was 2d a night, and for a single bed 4d or 5d. There were 8-12 people to a room which gave warmth, necessary because windows were sometimes broken. There was a living-room/kitchen with a brick and sawdust floor and a large fire; washing facilities were often a tap in the yard. The City Council's Health Committee in 1899 had recommended they be empowered to build a municipal common lodging-house four storeys high to house 120 people (FIG 187). This, since 1964 the Salvation Army hostel Redwood House (Whuer in litt. 18 June 1974) (FIG 188), was opened in 1905 at a cost of £7,000 excluding the furnishings. It took men only, charged 6d a night, and had individual accommodation - a cubicle with door and window (FIG 209). Lodgers had to bring their own food (FIG 210); facilities included a reading-room (FIG 211), a large dining-room, 120 lockers, and in the basement linen stores, baths, and a laundry (FIG 212) (Anonymous 1906 ed: 113-5; Stone 1909: 105-7). (Mansfield House, a Congregational settlement along the lines of Toynbee Hall started in East London in 1890, opened a lodging-house there in 1893; nightly charges there for beds were 3d to 6d (Inglis 1963: 166), suggesting the Bristol Health Committee's charge for their lodging-house in St Jude's and its superior facilities was not excessive.)

The existence of the degradation and squalor described here can only be properly understood in relation to costs such as 2d for half a bed in a common lodging-house as the C19. According to the reminiscences of an 80-year Bristol publican (Bristol Evening Post 20 October 1969), when she started in the public-house business in 1908 beer was 2d a pint and a large whisky was ca.3d: one can thus see the truth of the old adage "drunk for a penny, dead drunk for twopence" for a few decades earlier, and understand that with 2d for half a bed, say 6d for some food, and perhaps 4d to drink himself into oblivion, a man could exist on 1s a day; and in the conditions described it is not to be wondered tha so many did drink to excess.

In 1907 the Bristol Housing Reform Committee published a report entitled Bristol Hovels (Cooke 1907) which contained a few remarks related to the St Jude's area. This committee had been formed earlier in 1907 by Labour members of the Council and several Socialist and working-class organizations following what was felt to be an unsatisfactory reply - that "statutory overcrowding was not common in Bristol" and that preventable disease was not rampant in allegedly overcrowded homes - to complaints raised by councillors. Figures were produced from the Medical Officer's report for 1905 to show that the registration sub-district of St Philip population density per acre was 66.0 (48,639 persons in 736 acres) and that this was by far the highest concentration in the city, Bristol Central being next with a density of 51.6. Clifton by contrast had a density of 29.5. The maximum density for healthy life in a city was given as 25 per acre; Bristol's overall figure of 20.73 was achieved only by virtue of Stapleton having a density of 9.3 per acre and Westbury-on-Trym having one as low as 1.9 (pp4-5). Again, Bristol's infant mortality rate was 122.4 to every 1,000 births, well below the average of 140 for the 76 largest towns in the country, but in the sub-district of St Philip the figure was 142.4 (in Central it was 155.1) whereas in Clifton it was 98.2 (p.6). Regarding deaths from the seven chief epidemic diseases - smallpox, measles, scarlet fever, whooping-cough, diptheria, fever (typhus, enteritic, etc), and diarrhoea - and tuberculosis, St Philip was consistently in the top three areas, as was St George sub-district, which was part of the old out-parish of St Philip and Jacob east of St Jude's (pp6-7).

There follows the report of investigations of six districts undertaken by members of the committee, which probably caused some embarrassment when submitted to the Council (two houses in a court of six which shared two water-closets, one water-tap, and one wash-house had a notice "To Let! apply Peter Addie Council House"); but unfortunately none of the districts were identified (it was said that in at least one case a landlord had warned his tenants not to co-operate with the inquiry), so that it is uncertain if St Jude's was even included. It may have been district 5, for slaughter-houses are mentioned and as noted earlier these existed in St Jude's: the description suggests severe overcrowding compared even to the other districts - nine-roomed houses with 15 and 18 inhabitants, six two-roomed dwellings housing from 5 to 11 people for example - and could well be of the tenements and common-lodging houses in St Jude's. Certainly as described (pp11-12), it is by far the worst of the areas examined, and St Jude's was generally held to be Bristol's worst slum.

About 1930,[109] the Bristol Churches Tenements Association Ltd published a booklet outlining work so far accomplished and their plans for future work entitled Homes - As They Are and As They Will Be (Anonymous n.d.[26]). The Association's big plan was the conversion of a large premises in New St into 23 flats - as already noted when discussing the Friends' Poorhouse the building illustrated in the booklet (FIG 190) is almost certainly the school formerly, or else rebuilt on the site of, the Poorhouse, and the conversion is presumably the present New St Flats. Building conversions they had already made were in Orange St, St Paul's (behind Newfoundland St) and Albion Pl - earlier Union Pl (FIG 175, the 1903 plan) - off Redcross Lane, Redcross St, just across the road from New and Lamb Sts; and at time of publishing they were working on property in Cohen's Bldgs, Baptist Mills and Byron St, Newfoundland Rd (also at Baptist Mills). Whether they subsequently did other work in St Jude's is at present unknown, but their rents for their houses and flats of 10s6d-13s including rates are useful for comparison with rents for slum property in the same general area at this time given below. (There are before-and-after pictures of the Orange St (pp4-5) and Albion Pl (pp12-13) properties). The Albion Pl work was paid for mostly by contributions from All Saints, Clifton, suggesting the charity work by Clifton churches started ca.1870 and noted by Latimer and the Mercury and Daily Post reporter (see above) continued at least to ca.1930.

About the same time as the Bristol Churches Tenements Association Ltd published their booklet - 1930 - a survey of housing needs in Bristol was prepared by H.R. Burrows, Lecturer in Economics at the University of Bristol. This was published the following year by the Bristol Branch of the Garden Cities and Town Planning Assocation (Burrows 1931). St Jude's - defined here as the area bounded by Old Market St on one side and the Frome on the other, and therefore covering a larger area than pipemaking St Jude's - was found to be the most crowded of all the areas examined in Bristol, and was still marked by the letting of so-called furnished rooms. In many cases it was found tenants had furniture of their own, but had to rent furnished rooms because of lack of alternative accommodation; this suggests a change from the mid- and later C19 accounts where furnished rooms appear to have been rare, though The New Penny Magazine account in 1903 indicates furnished rooms were being advertised in St Jude's by that date. As with the Examiner account of 1850 the presence of large and formerly well-to-do houses now overcrowded, dilapidated, and damp was noted - this must refer, as did the 1850 account, to the Old Market St area of the old in-parish of St Philip and Jacob.

Three sample cases of bad housing are given. As locations are not indicated it is not known whether they were in the St Jude's pipemaking area, but they are probably representative enough of standards there. One house, with an attached cottage built in the backyard, contained 12 rooms sub-let "in more or less furnished portions" to 45 people comprising 10 families, rents ran from 5s to 11s. The premises was gloomy and damp, plaster was falling off the walls, the stairs were steep, dark, and dangerous. There was one outside water closet, one outside water-tap, and a practically unusable wash-house.

The second example was a very bad house, condemned but reopened to house occupants of an even worse structure. Two families, comprising 14 persons, occupied the six rooms at a total rent of 13s. The third was a house with five rooms and two garrets, occupied by four families. Two men rented one room for 5s, a family of seven rented two rooms for 6s, a family of eight occupied one 12 ft-square room and two garrets for 8s. The ceilings were cracked and in places bare of plaster; the stairs were dark, rickety, and dangerous; the kitchen roof let in light and rain; there was no yard and no wash-house facilities (the tenants used the Municipal wash-house at a cost of 2s). A survey of ability to pay higher rents for houses in new areas indicated that, on the basis of earning of the head of the household, 2% could move, and on the basis of total family earnings, 18%. These figures were comparable to those from people in other poor and slum areas (pp12-13). Six illustrations of slum housing are included in the report, but unfortunately their locations are not given.

The overall impression from these earlier C20 accounts of or including the St Jude's area is certainly not one of improvement compared to conditions in the second half of the C19; and the impetus of later Victorian philanthropy, the continued work of the BCM (D.W. Edwards 1927) and the Bristol Churches Tenements Association's New St project not withstanding, appears to have passed. Historically, this social work fulfilled an important task in awakening and developing social concern; but its limitations were that it too rarely progressed beyond the outlook typified by the Victorian hymn-writer Cecil Francis Alexander (1823-95) when he suggested the rich man at his table and the poor man at his gate had been made high and lowly and that God had ordered their estate. Certainly the provision of housing does not solve slum mentality - "Razing a slum", as Dyos notes, instancing the Wild St area off Drury Lane which 30 years after the once-fashionable houses in Wild Ct had been cleared in 1855 together with 150 cartloads from cesspits and 350, including a ton of bugs, from basements, and after innumerable charitable acts was still firmly occupied by the very poorest, "was not a final act of reparation" (Dyos 1967: 15); and the model lodging-houses built in Spitalfields just before and in the wake of the Jack the Ripper social concern in places such as Flower and Dean St, Thrawl St, and Lolesworth St (Bezodis et al. 1957: 248-50) are still the seediest part of Spitalfields - but equally certainly the later C19 philanthropy in St Jude's did nothing beyond paper over the worst accomodations and shore up the worse cases of poverty. Descendents of the George family recalled visiting "gramps" - Thomas George III - on Sundays after church dressed in their Sunday best, and how embarrassed they always felt walking through the area with seemingly all the inhabitants sitting on their doorsteps watching them: anyone who has ever visited slums with particularly depressed occupation will immediately recognize the feeling - this writer has observed it on a Sunday morning in St Philip's Marsh and at night in the Negro area of New Orleans. In fact it was not until the early 1930s that the city started systematically to clear the St Jude's pipemaking area, and then it was by compulsory purchase order; descendants of the George family recall the last Thomas George pipemaker retained the deeds to the family's 38 Gt George St property as a gesture of anger at the unsatisfactory price paid him for his property, and the deeds are still in private possession.

Prior to this time, it is unclear what action the city could, or at least did, take to ameliorate conditions. From 1871, as the Mercury and Daily Post reporter noted (see above), the city had had regulations concerning houses or parts of houses let in lodgings or occupied by more than one family, but the whole of Bristol in 1883 was covered by only two officers, and while doubtless an examination of city records would indicate the origin and development of this work and the powers the officers had, it seems from the St Jude's evidence that if they had an effective powers the application in St Jude's failed. As early as 1850 the Examiner had noted city missionaries and government inspectors had made some improvements to conditions in the common lodging-houses but that further improvements were urgently needed; subsequent accounts offer no convincing evidence that any real improvements occurred in the C19, whatever the Mercury and Daily Post reporter felt had been achieved in the years preceding 1883.

The same reporter noted (Anonymous 1884: 20) that a landlord had been told to lime walls on his property, but it is not indicated who told him and by what authority, nor whether it was even done. Elsewhere (p.27), the reporter noted that a second visit to some properties since the appearance of his first reports indicated landlords had been busy with lime and ochre, suggesting either that some could be embarrassed into making token improvements or that revelations could result in official action being taken. It is clear too, from the same reporter's accounts, that Board School representatives were trying to enforce school regulations and stop the exploitation of child labour, though often with little success. That the city's Health Committee in 1899 could successfully ask to be empowered to erect a municipal common-lodging house in the area indicates the city had some powers; and there were apparently powers to condemn property as unfit for human habitation, for property-deeds for 11 Wade St and 1-5 Milsom Ct directly beside it (BAO 14018) indicate this property - the landlord of which was regretably a cleric, one the Rev. Herbert Tanner - was so judged in 1915. Number 11, between the Salvation Army hostel and Gt George St - on the site of the brick warehouse in FIG 201 - was noted in 1714 and 1716 as being rented by Wade; it would not be surprising if it had remained substantially unaltered for the following 200 years. Milson Ct may have been a subsequent backyard development, but it is marked, though not named, by Ashmead in 1828 (FIG 168). However, even this drastic step was not necessarily permanent, as witness the 1930 reference to a condemned house being reused to take people forced out of even worse premises (Burrows 1931: 13).

Although started in the early 1930s, clearance of the St Jude's pipemaking area is still not completely finished, WW II interrupting the work. However, as noted above, few pre-clearance buildings now survive, and the area SW of Wade St has been largely redeveloped with multiple corporation dwellings themselves of various vintages. In the process, the 250-year old road layout has been somewhat modified, Pinnel St having disappeared and Gt Ann St no longer running to New St but terminating at Eyer's Lane (FIG 178).

However, a decade before systematic clearance of the area had begun the George family had fired their last kiln and the 300-year Bristol pipe industry had closed. The Bristol Evening News of Friday 9 December 1921 described three generations of the George family at the firing of the last kiln that morning. (The eldest was Thomas George III B 1847 and then aged 74, great-grandson of the founder Thomas I, described as "still hale and hearty notwithstanding the fact that he had never had a holiday in his life" - when he died in 1935, he was 88; his son Thomas IV B 1872, the last Bristol pipemaker, lived to be 96 and died only in 1968.) The following

Monday, 12 December, the kiln was to be emptied and dismantled and the last firing of pipes added to the nine months' stock the firm already had on hand. Thus ended Bristol's clay tobacco-pipe industry, after a continuous history of at least 302 years.

CHAPTER 7

Summary and Conclusions

SUMMARY AND CONCLUSIONS

One conclusion of this study is that, not unexpectedly, much work could be done on a number of aspects touched on and a number of new avenues could be explored.

As noted in 1: III, a modern critical study of the large amount of literature relating to smoking both in Britain and elsewhere is badly needed. Dickson's Panacea or Precious Bane: Tobacco in Sixteenth Century Literature (1954) is a scholarly work but is virtually confined to the C16; an extension on similar lines into the C18 covering Britain and Europe would be useful updating of Fairholt's Tobacco: Its History and Associations (1959), Apperson's The Social History of Smoking (1914), and Corti's A History of Smoking (1930, 1931 ed). These last three works - Fairholt and particularly Apperson for Britain, and Corti for Europe - deal well with the social history of smoking, but this specific field could probably benefit from another examination. The various sub-sections in 1: VII (Methods of Taking Tobacco) indicate that most of these topics would repay detailed examination - in particular, the introduction of cigarettes and of brier pipes, though occurring as recently as the 1850s, is obscure and already in the realm of legend. The history of neither meerschaum nor porcelain pipes has been touched.

Chapter 2 is one of the most important sections in this study. For the first time a comprehensive examination has been made of Western European clay pipe manufacture and its spread from England to The Netherlands and thence to Germany, Belgium, France, and the Scandinavian countries. Not only have detailed first-hand accounts of manufacturing methods used by two British firms, two German firms, one Dutch, and one Belgian been given but an examination of literary and museum material has revealed much hitherto unknown evidence for manufacturing techniques and the tools used. A few more recondite British encyclopaedias were not consulted for reasons of time or accessibility and the same applies to similar French material, and presumably there are Dutch, German, and Scandinavian sources existing which have not been tracked down; but it is believed this study of manufacturing methods and their history is a definitive one.[1] A comprehensive study of the clays used in Western Europe for pipemaking is still, however (see 2: IX), to be undertaken. The distinctively North American stub-stemmed pottery pipes (2: VIII) form a separate industry of their own which still awaits a major study.

Chapter 3 was originally intended to be no more than brief background studies of the pipemaking industries in various Western European countries to supplement the discussion of manufacturing techniques in these countries (Chapter 2) and generally to orientate the reader. It grew mainly because it was found that information was frequently available only in obscure or even unpublished sources, and because it was felt this section could be a useful repository for collected data which might provide future researchers with a base from which to start. In the case of Britain, the rapid and continuous increase in research in the field of pipe studies should enable a general synthesis to be attempted in the near future, and in fact Oswald hopes to prepare such a work with the aid of a number of workers involved in regional studies [this has since appeared - see Preface]. Chapter 3 Section I is therefore only a brief account of some of the more recent results of studies plus hitherto unrecorded evidence gathered in the course of the principal research for this thesis - the material relating to the early history of the Westminster-London pipemakers' guild, for example.

In the case of the Dutch industry (3: II), the main work is still Helbers and Goedewaagen's Goudsche pijpen (1942), though it is out of print and now scarce and deals only with Gouda, the principal manufacturing centre. Further, it illustrates no bowl forms, and Friederich's various articles (1964a-d; 1970) do not form a wholly satisfactory basis for attempting a typology. This writer knows of no work being done by Dutch archaeologists on pipes, though presumably pipes must be turning up plentifully on Dutch post-medieval sites and shipwrecks. In view of the frequency with which Dutch pipes are occurring on North American historical sites a comprehensive survey of Dutch pipe material would be extremely useful.

To this writer's knowledge, nothing has been done in Germany (3: IV) to study pipemaking there. The Westerwald industry, which appears to have been the biggest, is totally unstudied and its origins - other than what is deduced in this study from linguistic and technological evidence - unknown. As with pipemaking elsewhere in Germany, present evidence comes from incidental references, normally from Dutch sources. The presumptive origin for the Gottfried Aust stub-stemmed pottery pipes which may have inspired the United States pipes of this form (noted above) is totally obscure but must lie in Germany or at least in Central Europe, and this field promises to be a whole research topic in itself.

In Belgium (3: IV) Lefrancq has published good preliminary articles on a couple of aspects of pipemaking there (1970a; 1970b), and it is much to be hoped that he will be able to produce the comprehensive studies which so far have been lacking and to publish his extensive list of Belgian pipemakers of the C17 to C20.

After preparing the section on the French industry (3: V) in draft the writer revised it to include Jean-Léo's research published in his Les pipes en terre françaises (1971). The greater part of this book is an invaluable and well-illustrated catalogue raisonne of the Gambier firm's products together with a number of other firms' catalogues, excellently reproduced; it does not wholly live up to its title in that it does not present a definitive study of the French clay pipe industry, but it does produce much evidence hitherto unknown to this writer. On the other hand, the writer has considerable data apparently unknown to Jean-Léo. The combined material, presented in condensed fashion here, may enable a major study of the history of French pipemaking to be started by some interested scholar.

So far as this writer is aware, nothing has appeared on Swiss pipes since the late C19-early C20 articles noted in 3: VI, most of which sought to prove a Roman or similar origin for the extremely interesting metal pipes used there at one time. As indicated in 3: VI, these pipes must have a Dutch-German inspiration and probably date to the later C17 and the C18; but their social history, their origins, rise, and decline, and everything about them is at present totally unknown and clearly form another major research field.

The Scandinavian studies of pipemaking in Norway (Pettersen and Alsvik 1944), Denmark (Kristensen 1959), and Sweden (Puktörne 1968) on the other hand suggest that the minor industries in these countries, as well as the pipe material itself, have been well studied. So far, little archaeological application of pipe finds has been made, but Puktörne notes their usefulness at the Varberg excavations and we may expect more reports to follow with description of pipe finds.

All in all, therefore, it can be seen that the Dutch, German, Belgian, French, and Swiss pipemaking industries at least would well repay a major investigation.

Chapter 4, as noted in its Introduction (4: I), was written to see what recurrent features might be discernible from brief studies of various pipemaking centres and how these might relate to the detailed study of Bristol pipemaking. As the Conclusions section (4: VII) indicates, this did prove worthwhile. Further, a considerable amount of data, particularly relating to trade in or to North America and therefore not readily available to British readers, was collected and presented here, again as a hopefully useful source for anyone interested in making detailed studies of pipemaking in any of the centres discussed. The Liverpool industry (4: II) is as yet totally unstudied; and though there is an extensive coverage of Chester makers in G.C. Spence 1942 and a few drawings of marks, bowl forms and dating and the origin of the elaborately-decorated stems and the Chester export trade all still await study (see 4: III). So too does the question of whether Liverpool or Chester invented the idea of moulding makers' names and places of work on stems. (Regretably, R. Wilson of Chester who was working on the industry there died in 1968.) Glasgow, the chief supplier to North America of clay pipes in the C19 (4: IV), was examined in somewhat more detail than the other centres, and a list of 107 Glasgow pipemakers and pipemaking firms covering particularly the C19 was prepared and appears in Appendix VII; this should be of considerable use to archaeologists in North America, but may also stimulate a more detailed study of the Glasgow pipe industry or of its trade abroad last century. A particular interest of the Montreal industry (4: V) is that it was established by Irish immigrants coming to Canada as a direct result of the Potato Famine in Ireland in the 1840s; its partial migration in the 1870s to Detroit is an interesting example of bodily movement of businesses and families over a considerable distance in an attempt to establish a better market. The studies of Scottish and Irish tobacco consumption, with their economic and social ramifications, promise to be whole topics in themselves.

Although the data presented in Chapter 5 is in many ways sketchy, it is an important contribution in that it gathers together information on prices and wages over a considerable time period and much of the country a compilation which has hitherto not been attempted for items such as pipes. From the evidence it has been possible to make some observations on the social and economic status of pipemakers, particularly in the C19 when the pipemaking industry was in dire and chronic poverty. It is hoped that some of the material collected will be of use to historians working in the social and economic fields.

The Bristol pipe industry is examined in Chapter 6, and is the major piece of research in this work. By combining a large amount of unpublished and unstudied sources - for example the apprentice rolls, the burgess rolls, the poll-books, and trade directories - with a survey of archaeological and museum material covering much of England and all of North America, a coherent pattern of origins, rise, trade, decline, and social history was revealed in a detail hitherto unobtained certainly in any study of pipemaking. Particularly gratifying was the way in which independent strands of evidence agreed with each other: for example the apprentice and burgess rolls both indicate a sharp drop in the size of the industry ca.1740 and this agrees with poll-book evidence and with North American archaeological evidence that the heyday of the industry was the first third or so of the C18. Also rewarding to the writer was the life brought to the study by Bryant's reminiscences in 1787 and the 1850 account of the poverty of a pipemaker in St Jude's recounted in an issue of the Examiner; and the occasional glimpses of humanity, humour, graft, and corruption. Pipes in Bristol City Museum from the urban renewal in the early 1960s in Lamb St in St Jude's, custom rubber-stamped in the way described by the T.J. Corcoran firm of Lamb St in their 1892 directory advertisement, were almost certainly Corcoran's products, and brought life to the advertisement, as well as providing unexpected evidence for Bristol pipes still being traded as far as Swansea and Plymouth as late as the 1890s, something one would not have otherwise expected so late with the industry almost dead.

Examination of apprentice- and burgess-roll entries by periods showed significant patterns in the progressive decline of guild control and the general relevance of apprenticeship and freedom-taking, much of it fitting in with, though occasionally modifying, Rogers's study of Bristol guilds (1949); and examination of the occupations of pipemaker apprentices' fathers produced some useful social conclusions. An analysis of apprentice ancestry by area of origin also produced useful social evidence. Wherever possible, evidence of this type was compared to similar evidence for other social groups both in Bristol and elsewhere in England.

Study of trade patterns at home and abroad as revealed by archaeological and museum evidence proved particularly interesting. A convincing case can be made that Bristol, already a port with increasing tendencies to specialize in certain aspects of oversea trade, progressively specialized in exporting pipes to North America during the second half of the C17 and ceased to supply the quite considerable hinterland, particularly up the lower Severn and its western tributaries, which it had had in the earlier and middle C17.

It was also evident that when the Bristol industry revived in the early C19 after its collapse in the 1760s and 1770s it was under a generation of makers who appear to have had little connection historically with the ancien regime of the C17 and C18. The demolition in recent years of virtually all the old properties in the St Jude's area, as well as the impracticality due to time limitations of studying the voluminous documentary material for the area in the form of property deeds and the like, prevented a thorough study of the C19 social history of the area, but enough evidence was collected to show the deep and chronic poverty in which pipemakers must have lived even at the height of the industry last century - the 1840s and 1850s - let alone when the bottom fell out of the business in the 1860s.

Lastly, there is the corpus of 705 Bristol pipemakers and pipemaking firms with drawings of as many of their products as this writer feels can be reasonably identified, which appears as Appendix IX. This should prove of considerable benefit to archaeologists both in Britain and North America and particularly to the latter in view of the major Bristol pipe trade there. As an archaeologist on historical sites since 1962, the writer feels this is a key section, for from it is built much of the economic history covered in this chapter.

Three major fields are still open to researchers on Bristol pipemaking. One is the port-books, which should give much detailed information on patterns of trade and the rise and decline of the industry. Apart from all the detail these books can be expected to give on the North American trade already indicated by the widespread finds on that continent of Bristol pipes, there should be additional evidence for pipes being traded to Ireland, Scandinavia, and Africa where at present archaeological recovery of pipes has hardly begun and about which only scattered documentary references to Bristol exports have been published. In particular, archaeological work on Contact and post-Contact sites in West Africa is eagerly awaited, for not only should there be much Bristol material associated with the slave trade there but the accuracy of the George family tradition that one of them helped produce pipes for the early C19 trade there may be proved. The George's trade latterly with South Africa should also appear in the port-books. The accuracy or otherwise of Friederich's contention that Bristol pipes were exported to The Netherlands ca.1700 should also be decided.

The sources of Bristol pipeclay may also be determinable from such a study provided the entries refer to pipe- or ballclay; in any event place of origin of shipments should give an indication of the type of clay. With the Bristol delft industry commencing before 1650 there should be plenty of references to imported ballclay, though local Dundry and "Stacent" clay (2: IX) was also being used. The export of Dundry clay to The Netherlands in the C17 instanced by one source (2: IX) should also be confirmable from such a study.

Port book entries may also be able to confirm the suggestion that the War of Jenkins' Ear and the War of Austrian Succession caused the sharp decline ca.1740 of pipemaker apprentices and pipemaker freemen recorded; they should also be able to add precision to the period 1760-80 when the evidence there is that it was the outbreak of the American Revolution in 1775 which finished off the industry and Bryant's reminiscences that it was the Stamp Act troubles of 1765-66 which caused the industry to fall into poverty are in slight conflict. Also interesting, in view of the apparent sensitivity of the Bristol industry to disruption in its oversea trade, would be a study of trade in the period 1702-13, the War of Spanish Succession, for there appears to be no evidence that the industry was hurt during this time.

The second topic for continued research in Bristol is the ongoing one of recovering, identifying, dating, and publishing pipe material recovered in the increasing archaeological work associated with urban renewal within Bristol. As examples of this can be cited the pile of clay pipe wasters discovered at the angle of Broad Weir and Lower Castle St which can be dated to ca.1782-92 and is attributable to the Israel Carey F 1756 who moved to immediately-adjacent Castle Green in 1781 or 1782 and was still there in 1787 but was dead by 1791 (R.G. Jackson 1972); the group of mid-C19 Ring-made bowls from Temple Back (*Arch. Rev.* 6 (1971) 47 s.v. Bristol - Temple Back; repeated in Cherry 1973: 114); the wasters and kiln-debris from Lewin's Mead which revealed a number of varieties of pipes, the majority identifiable as products of James Jenkins F 1707, fl 1739 (O. Kent 1973: 198; *Arch. Rev.* 7 (1972) 61 s.v. Bristol - Lewin's Mead); the kiln-debris and early-C19 wasters of an unknown maker found in Lower Castle St (*ibid.* 62 s.v. Bristol - Lower Castle St); and the kiln tip deposit found immediately beneath Whitefriars, a lane off Lewin's Mead, which produced material identical to the Israel Carey material noted above (R. Price *in litt.* 18 January 1974) and undoubtedly immediately predating the Castle Green-period material, as Carey was working at Lewin's Mead certainly by 1775 and until he moved to Castle Green in 1781 or 1782. The first two of these discoveries were made in 1971, the second two in 1972, and the fifth in 1973, all too late to be included in this study. The publication of the first two and the last groups in particular will be of the greatest interest, not only because no definitely-attributable Israel Carey pipes and virtually no Ring bowls have hitherto been identified but because for the first time selections of late C18 and mid-C19 pipe-material will be available to show the styles in use in these periods and to permit comparison with these styles typical of the earlier and mid-C18 and already well-known (cf I. Walker 1972c: *passim*). Another recent discovery has been that of a stem-fragment marked J. WILLIAMS - BRISTOL (*Arch. Rev.* 7 (1972) 61 s.v. Bristol - All Saints Lane, Crown Inn). While this could be a product of any one of three John Williamses working during most of the C19 (qq.v. Appendix IX), it is of interest because there appear to be so few Bristol C19 pipes known bearing the name and place of their maker (cf p.680).[2]

Additionally, a field ideally suited to local researchers is the pursuing of further details on the various Bristol pipemakers listed in Appendix IX. There were limits to what sources could be checked by this writer, having regard to other necessary aspects of this thesis such as examining the home and oversea trade in Bristol pipes and collecting identifiable products of Bristol makers. To check, for example, 300 years of parish records for most of the 17 Bristol parishes plus Castle Precincts for extra evidence for the some 700 catalogued pipemakers would have been a task which would have taken time out of all proportion to what was practical. Such sources, however, plus wills, census records, marriage bonds, and much other unpublished material are likely to produce a good deal of detail, particularly as regards date of death which would sharpen many of our present date-spans for makers and will surely reveal interesting details on social conditions. Certainly there will be topics of specific interest such as tracing pipemaking families - the Tippets and Georges, for example - in detail.

It is to be hoped too that a kiln site in some state of preservation may be excavated: neither the Tippet kilns in Whitson St and Rosemary St nor the Okely kiln at Water St-Hollister St nor the Richards kiln in Thomas St

(Marochan and Reed 1959: 122 n.1) were ever reported on, and the St Jude's area has probably been lost; yet as noted in 2: VII few pipe kiln excavations have been recorded anywhere in Britain. With the considerable documentary sources available in Bristol (and what must be one of the best-kept archives in the country) there should be no insurmountable problems in locating areas of known industrial activity in advance of clearance - thus leaving only the inevitable problems facing all archaeologists, those of funds, staff, and publication (cf Ponsford 1971).

The third topic is an historical and sociological study of the St Jude's area, a project which might invite the attention of some industrial archaeologist. As indicated in 6: VIII, the Bristol Archives Office has the property deeds of a large part of this area, many of them going back to the laying out and initial settlement of the area from the first decade of the C18 onwards. From the point of view of such a study, the demolition of almost all the old area and the erection of more modern dwellings, mostly multi-storey, over various parts of this century and indeed up to the present time without some sort of study similar to those done for parts of East London as noted in 6: VIII is regrettable; but it is not yet too late to obtain first-hand accounts of the area from inhabitants, or former inhabitants, and as indicated in 6: VIII a certain amount of literature - mainly pamphlets relating to social observations or improvements in the area - does exist. This writer has not contacted people in the Salvation Army hostel at the corner of Wade and River Sts, but the four surviving public houses which still survived in 1969, structurally isolated from their originally densely built-up surrounds and no doubt viewed by planners as impediments to large-scale development of the area, do offer a useful ground from which to start. Certainly, no social historian should miss the "Volunteer" in New St with its spartan interior, iron stove still standing in the middle of the room with its chimney-pipe leading through the ceiling, signs saying that draught cider will not be served after 7 p.m. except to known clientele, and its distinctive class of patrons. As noted in 6: VIII, a study of C19 social work with particular reference to the St Jude's area could well be rewarding, the early establishment of the Bristol City Mission, the early appearance of "settlement" work by Clifton College and other institutions and individuals from Clifton, and the apparently uncharacteristic concern among Bristol Friends for mission work all being particularly likely to produce interesting results. More ambitiously, a study of the social and economic organization implicit in a C19 slum akin to that for the Potteries of Notting Dale in northern Kensington (Malcolmson 1970; also noted in Dyos and Reeder 1973: 371-2; cf also Reeder 1968: 264 and refs, 256-7 figs 14-15) might prove of the greatest interest.

Essentially, an archaeologist is an historian who uses certain techniques of research to present aspects of a picture not often considered by more conventional historians. In this study of clay tobacco-pipes, particular use has been made of the archaeologist's knowledge of identifiably Bristol material recovered from excavations to examine Bristol trade and in fact present the opposite side of the coin seen in studies of Bristol trade from more conventional historical sources such as port books (cf for example McGrath (ed) 1955, 1968 ed; Minchinton (ed) 1957). To have attempted a study of Bristol's port books would have been a task for which this writer is not professionally equipped; on the other hand, if Bristol economic historians find the archaeological data and interpretations presented here helpful in their studies, as this writer has found their presentation of documentary sources, then a major usefulness for this thesis will have been demonstrated and a hopefully fruitful dialogue established.

Here, the archaeologist's evidence is likely to be of particular use to social and economic historians and to industrial archaeologists, and the archaeologist himself is in part social and economic historian and industrial archaeologist. There is, after all, nothing remarkably important or valuable about clay pipes in themselves: it is what one obtains as a result of starting such a study that is worthwhile. At the beginning of this study, this writer quoted Jean Harrington's remark (1955b: 1124) that excavations of historical sites have made relatively little contribution to history but a considerable contribution to historical data; and Chapman and Chambers in the Introduction of their The Beginnings of Industrial Britain (Chapman, Chambers, and Sharpe 1790: 1) say essentially the same thing of industrial archaeology, observing that "The methods of Industrial Archaeology,...are an aid to, not a substitute for, a close study of the events themselves". In the case of this writer, having moved from British and European prehistory into historical archaeology, his interests have steadily expanded from clay pipes as a dating tool for archaeology to the examination of manufacturing techniques, to the consideration of those who made the pipes, to their social and economic status, and through the traditional equation of the working class with non-conformity to an interest (not pursued in this study, however!) in the history of Unitarianism and thence to non-conformist church architecture (cf I. Walker 1971g). In the Introduction to this work this writer noted that history is ultimately the study of people, and a more impassioned plea for this is presented below. As a study of people, history knows few boundaries, and certainly few of those invented to divide scholarship into neat artificial categories. History is the study of people, in every form from prehistory to industrial archaeology.

Industrial archaeology, it has been suggested, has reached a critical stage from which it must either advance or regress (e.g. Buchanan 1970b; 1972b: chapt 3; Cossons and Hudson (eds) 1971: section I); but assuming it is to advance it is not clear in what direction it should do so. As a field, industrial archaeology has had a rather unusual formative period. The term "industrial archaeology" was first popularized in 1955 by Michael Rix, an architectural historian, when he contributed an article with that title to The Amateur Historian[3] (Rix 1955). This article, the last in a series in that journal on different branches of archaeology, gave no close definition of nor explanation for the term, and in a subsequent article in the same journal seven years later (Rix 1962), the author admitted the use of the word "archaeology" had been criticized "since, by definition, it is concerned with things that are old, and mechanical industry is a development that is comparatively recent" (p.56). The following year Kenneth Hudson, in the first major work to define and describe industrial archaeology, noted that the term had "been much disliked and strongly criticized" because

> [the term] 'Industrial Archaeology' is an impossible mongrel,

> the ugly offspring of two parents who should never have been allowed to breed. 'Industry',...is by common agreement, a recent growth, a phenomenon no more than two hundred years old. 'Archaeology', also by common agreement, deals with the more distant past. How then,...is it reasonable or decent to speak of industrial archaeology in the same breath?
> (K. Hudson: 1963, 11-12, 1966 ed).

In 1967, in a booklet on industrial archaeology, Rix still felt it necessary to rebut criticism that the term was "a contradiction...since archaeology is ancient and industry is modern" (Rix 1967: 5).

This argument, however, seems to this writer (who is an excavating archaeologist) to be based on a false premise, though certainly there have been individuals who have criticized the term industrial archaeology on the grounds indicated. There is no contradiction of the kind asserted between the terms "industrial" and "archaeology", else we would hardly be able to talk of "medieval archaeology" and still less of "post-medieval archaeology" or (in North America and Australia) "historical [or variations of that word] archaeology": Glyn Daniel, noting Sir Alfred Clapham's dictum that archaeology began yesterday, rightly observes that in fact it begins today (G. Daniel 1963: 252; cf Bonnichsen 1973 and Rathje 1974). A number of excavations demonstrate the usefulness of this technique to the study of the recent past, for example those by Webster of two Ontario pottery - industrial! - sites of the second half of last century (D.B. Webster 1968; 1971), by Fontana of an Arizona ranch site of the same period (Fontana et al 1962), by Brose of a rubbish dump of the last quarter of last century (Brose 1967), and by Durrenberger of a mill- and house-site in Texas occupied form the early 1860s until - and this latter date was established by archaeological evidence, not documentary sources - sometime after 1914 (Durrenberger 1965), to name only some. The real concern among excavating archaeologists has been, as David Crossley, himself an excavator of a number of industrial sites, particularly post-medieval iron-working and glass-making sites (e.g. Crossley 1968a; 1972; Crossley and Ashurst 1969; Crossley and Aberg 1972), noted in 1968 when reviewing the above-noted booklet by Rix, that there is a feeling that "much is being lost in industrial studies by the inability or unwillingness of Industrial Archaeologists to appreciate the benefits which a training in excavation techniques could give them" and by cases where excavation has meant simply site-clearance (Crossley 1968b: 138). In other words, industrial archaeologists are tending only to scratch the surface (no pun intended) of the field, doing the sort of work an excavating archaeologist would do on an industrial site - recording standing structures and surviving layout and equipment - but not continuing their research logically by including excavation among their research techniques when desirable or necessary (or worse, by digging up a site unscientifically through lack of knowledge of, or interest in, proper excavation technique). Arthur Raistrick has made a powerful appeal for the inclusion of excavation techniques in industrial archaeology, and with it the broadening of the field to include pre-industrial revolution industrial archaeology (Raistrick 1972), but his call seems to have been coolly received (Buchanan 1972c: 248; Hume 1974: 62).

Further, by concentrating so exclusively on remains from the period from the industrial revolution onwards, industrial archaeologists are tending to concentrate on standing remains only, and thus to forget that within certain limits the best-preserved remains of all may be under the ground and their wealth of unrecorded data recordable by proper excavation. This lack of comprehension of the potential of excavation is strikingly exemplified in an otherwise very thoughtful article reviewing the first five years of the journal Industrial Archaeology which echoes many of the concerns voiced here, by the director of an American textile museum, who believes

> The classical archaeologist digs because he has to. Nothing else survives. But the man who would write about the history of modern industrial civilization in the United States and Great Britain already has many kinds of evidence available to him -engineers' notebooks, personal correspondence, contemporary periodicals, photographs, and company records, to name a few types. Those have been and will continue to be the major sources for the modern historian. Only when no other adequate record survives must he be concerned about physical objects (Leavitt 1969: 591).

This is a lamentably naive view. Classical archaeologists probably have as many written sources relating to their research as do industrial historians to theirs, and Mr Leavitt's textile museum must be astonishingly fortunate if it has such a store of the sources he lists that he has a complete view of the Merrimack valley textile industry. As for the last sentence of the quotation, one's mind boggles at the thought of a museum director who believes that "Only when no other adequate record survives must [the historian] be concerned about physical objects". (In fact, the City College of the City University of New York started a long-term programme of archaeological investigation and excavation in the Merrimack valley in 1974 (Schuyler 1974).) Industrial archaeologists tend, perhaps, to be dazzled by the splendour of visible remains and well-used machinery: that something so modern as a C19 locomotive works can be profitably excavated to add new information to our knowledge of C19 industrial processes would apparently be difficult to convince most industrial archaeologists of, but it is certainly the case (Rutsch 1973; Rutsch and Leo, "Excavations in Paterson's Locomotives Works: What We Found and What it Signifies", paper presented at the 1974 autumn symposium of the Council for Northeast Historical Archaeology, Paterson, New Jersey. Papers presented at that symposium, the theme of which was the industrial archaeology of Paterson, have since been published: see Cotz 1975; Fries 1975; Leo 1975; Margrave 1975; Morrell 1975; Ristau 1975; Rutsch 1975; C.I. Wilson jr 1975.)

Hudson in 1963 made much play of the fact that in the C19 "archaeology" was the recording of visible remains through field surveys rather than the excavation of sites and that the use of the word in the term "industrial archaeology" could be justified on those grounds. This argument is true so far as it goes, and the word archaeology is still used with this meaning - Hudson notes Archaeology in the Field by that field archaeologist par excellence the late O.G.S. Crawford (1953), and another indefatigable field archaeologist, Angus Graham, includes among his innumerable field studies *one entitled "Archaeology on a* Great Post Road" in which he specifically defined his paper as

> [exploring] the history of a highway,...by an archaeological method. Its conclusions, that is to say, are based primarily on observations made on the ground, though eked out, where possible, with maps and record material (Graham 1965: 318).

Hudson's justification, however, does ignore certain related points. First, in its C19 sense archaeology really meant the techniques used to record the visible remains of the past: in the C19, excavation techniques with the exception of very few instances - such as the work of Pitt-Rivers in southern England at the end of the century - had not evolved beyond the digging of uncontrolled holes or trenches; but with the evolving of scientific excavation techniques it is only reasonable that excavation should have become so important a part of archaeological technique in the C20. Secondly, even in the C19, "archaeology" provided the data from which one developed "prehistory" (thus the title of Sir Daniel Wilson's book The Archaeology and Prehistoric Annals of Scotland published a century and a quarter ago (D. Wilson 1851b)); and one of this writer's concerns - see below - is that "prehistory" (for which read history) does not seem to be developing out of industrial archaeology. Thirdly, harking back to an earlier paragraph, field archaeology should lead, as necessary, to excavation: the man who reads Archaeology in the Field will follow it by reading Archaeology from the Earth. Hudson has read only the former.

The concern, however, should not be whether "archaeology" ought or ought not to imply excavation techniques or whether industrial archaeologists are using the word in an earlier, purer, and more "correct" form. Concern should revolve round the very practical point that excavation is a very important and useful technique to discover and record information about structures of the past, standing or not, and about the work done in these structures and those doing the work; and that to omit its use (and in some cases one feels this omission has become deliberate, a way to separate industrial archaeology from other archaeology) is to lose much potentially useful information and thus to produce an incomplete and possibly superficial study (Woolrich, in a review of Angus Buchanan's Industrial Archaeology in Britain (Buchanan 1972b) makes this same point in criticizing the persistent refusal of industrial archaeologists to recognize the usefulness of excavation as a technique in their field (Woolrich 1973: 267-8)).

A more sinister weakness of the field, however, has been a growing tendency by some of its practitioners to extol as the virtues of the field the belief that all men are brothers, that enjoyment of the work is the most important feature of the field (and that this can be achieved only by non-professionals), and that professionals and academics are bogey-men out to kill the field by imposing the puritanism of intellectual standards. The most strident statement of this feeling, replete with some singularly ponderous sarcasms, has been a recent article by Hudson (K. Hudson 1974) criticizing an article by Riden (1973) querying the scholarship and goals of current industrial archaeology (see below); and it is a difficult pose to try to combat, falling as it does into the "You're all against me because I'm paranoid" syndrome. As part of his broadside, Hudson lists the contents of the first issue of the Journal of Industrial Archaeology in 1964 and compares it with the contents of the then most recent issue ten years later (vol 10 no 4; by now simply called Industrial Archaeology); but a closer examination of the titles listed seems rather to hoist him with his own petard, for in fact, going by these titles, one would have to conclude that the sorts and level of topic covered were the same in 1974 as ten years previously. This may be what Hudson is trying to point out, but if so, it would appear to weigh in favour of Riden's complaints, for in ten years one might have expected to see some development in the field, in whatever direction. One doubts if Riden's complaints about lack of scholarship in the field are really caused by his difficulty in talking, eating, and holding up his head in daily conversation with his fellow-intellectuals at St Edmund Hall, as Hudson suggests: it seems more likely that it is the static nature of the field and the seeming lack of movement in any direction which concern him. Further, Riden's article is neither new nor isolated in its views, as one might suppose from reading Hudson's dismissal of it. Leavitt made many of the same criticisms in 1969 and both Leavitt and Riden cite a number of writers, particularly reviewers of books on industrial archaeology, who have voiced similar concerns about the field. Even earlier, in a paper to the 1967 Bath Conference on Industrial Archaeology, the professional-amateur relationship was carefully discussed by Buchanan, who pointed out there need be no stifling of amateur enthusiasm if industrial archaeology became an academic subject and concluded that the most hopeful prospect for the field was for it "to develop into an academic study as part of the history of technology and general social history, while maintaining its grass-roots connections with voluntary local societies and amateur enthusiasts" (Buchanan 1968: 13). This, after all, is what has happened with every other branch of British archaeology, where the amateur has always worked, and still does work, closely with the professional. The amateur, in fact, has always been the backbone of British archaeology, and the existence of the better part of 300 societies connected with non-industrial archaeology and local history and nearly 200 publications covering the same fields (figures from CBA's Archaeology in Britain 1972-73 and Archaeological Bibliography for Great Britain & Ireland 1972) testify to the continuing vigour of amateur non-industrial archaeology, a number of county societies and their publications being over a century old.

With a field as many-sided as industrial archaeology is, there can obviously be a variety of ways in which it could develop, and indeed it is to be hoped that when (or if) development takes place it will do so in a number of directions concurrently. However, if history is indeed ultimately the study of people, industrial archaeology seems ideally suited to assist in achieving such a goal, but few of its practitioners appear to be inclined this way. The definition of industrial archaeology advanced by Buchanan (1972b: 20), that it is

> A field of study concerned with investigating, surveying, recording, and in some cases, with preserving industrial monuments. It aims, moreover, at assessing the significance of these monuments in the context of social and technological history

is one perfectly acceptable to this writer; what concerns him is that two decades after the first use of the term industrial archaeology, so little has been done to further the study of social history by its techniques. Leavitt observed in 1969 that

> Industrial archaeologists have created, copied, and gathered records, but they have written very little history.... [They] have given us many notes but no finished stories of consequence. They have been object-centered rather than subject-centered (Leavitt 1969: 591).

George Ewart Evans, talking about the recording of obsolete industries and trades, says much the same thing:

> Industrial archaeologists have already done a great deal of work...in this field within the last twenty years or so; but industrial archaeology, at least when it emerged, tended to follow the pattern of its older sister and concentrate almost solely on the object: the machine, the factory product, or the industrial buildings. The men - usually the last survivors - who had built or worked the machines or practised the craft were often ignored (G.E. Evans 1975: 189).

Basically, the monuments are being faithfully described, but not so the people.

D.M. Smith, while basically putting forward the same definition of the field, specifically included "company houses and industrial townships" along with the more obvious monuments such as factories, canals, and railways (1965: 15); and in his conclusions he maintained:

> Often [industrial remains] can reveal a great deal about the people involved. Industrial archaeology is, of course [sic], ultimately concerned with people rather than things: factories, workshops, houses and machines are of interest only as products of human ingenuity, enterprise, compassion or greed - as physical expressions of human behaviour. From whatever standpoint the subject is approached, man is the basic object of our curiosity. Each factory has something to tell us about the man who built it, and about his reaction to the economic and social opportunities created by the Industrial Revolution. Each machine tells us something about its inventor - about the capacity of human ingenuity to meet the needs of the new technology. Each row of workers' cottages reflects something of the lives enjoyed or endured by its inhabitants, and something of the character of the employer who built it. Those responsible for the birth of our modern industrial society erected their own monuments. It is for us to attempt to read and interpret the inscriptions (1965: 191).

Rix quoted all of the above with approval in the closing section of his 1967 booklet on industrial archaeology (1967: 20), and only recently Raistrick has emphasized that the field

> must be one of the humanities and it must achieve a view of man at work in varying tasks and surroundings, in which view the recording of a factory is as much a recording of the place in which lives have been spent as one which sheltered

> archaic machines....can we, with this approach, find something which the social historian has not already done for us? We are forced back into the view that industrial archaeology must be an integration of man at work, with the tools, structures, and materials with which he works, and the immediate environment in which his work is done (Raistrick 1972: 12-13)

but if indeed industrial archaeology is "ultimately concerned with people rather than things" and "man is the object of our curiosity", and if industrial archaeologists when recording a factory are recording "as much...the place in which lives have been spent as one which sheltered archaic machines", then few people are doing industrial archaeology or even being curious.

Apart from D.M. Smith, few others in the field appear to have considered company townships or working-class housing as industrial monuments. A perusal of the journal Industrial Archaeology since that periodical was founded in 1964 shows few articles on these subjects and only two with parallels to this writer's survey of St Jude's, both, significantly, by D.M. Smith (1964; 1966), the former on the Birmingham gun quarter and the latter on the hatting industry of Denton in Lancashire. Further, in the David and Charles "The Industrial Archaeology of the British Isles" series of which Smith's book is a volume, only Ashmore's volume on Lancashire (Ashmore 1969: passim) and, briefly, Marshall and Davies-Shiel's volume on the Lake Counties (Marshall and Davies-Shiel 1969: chapt 8), appear to offer some discussion on industrial housing or planned industrial communities; and it is perhaps significant that when studies of working-class housing have appeared, for example David and Charles's The History of Working-Class Housing: A Symposium (Chapman (ed) 1971), they come as a separate topic, though in the case of this volume at least one contributor, John Butt, is a prominent industrial archaeologist.

Essentially, however, we still await an industrial archaeological coverage of churches and chapels (cf I. Walker 1971g). Asa Briggs, in his Foreword to The Study of Urban History (Dyos (ed) 1968), noted, a propos of the urgency for urban studies caused by the speed of modern city transformation, that "There are obvious links between urban archaeology and industrial archaeology" (Briggs 1968: vii); but in fact the conference whose papers appear in the book to which Brigg's Foreword is attached was not presented with much evidence from industrial archaeologists as to the viability and usefulness of their field, only two of the contributors, F.M. Jones and J.D. Marshall, appearing to be industrial archaeologists. In fact, both their papers (F.M. Jones 1968; J.D. Marshall 1968) did convert industrial archaeology evidence into aspects of social history, Marshall indicating the same interest in planned industrial communities touched on in his Lake Counties work (J.D. Marshall 1958: chapts IX-XIX passim; 1971: chapt 12; Marshall and Davies-Shiel 1967: 131; 1969: chapt 8) and Jones discussing the aesthetic of the C19 industrial town, certainly a topic little considered hitherto. However, there was no attempt to present grass-roots industrial archaeology and show its potential for urban social history; and that industrial archaeology is missing an excellent opportunity to make a name for itself in this field is suggested by Dyos's remark at the same conference, that "Housing itself is oddly neglected....we have too few authentic tales of mean streets, of the making and unmaking of slums" (Dyos 1968: 37-8), indicating that the topic has been equally neglected by urban historians (see, however, Dyos's own observations on the development of slums, 1967: 24-39). This neglect on the part of industrial archaeologists is the more regretable when one gathers (D.M. Smith 1964: 108) that complete areas such as small industrial townships do come within the scope of industrial archaeology as defined by the CBA's list of type monuments.

This restricted utilization of the field of industrial archaeology is basically the complaint of Riden in his recent article criticizing the present state of industrial archaeology (Riden 1973); and interestingly, he makes the same point (pp214-5) about the neglected field of working-class housing. Riden's article has been criticized in the American Society for Industrial Archeology Newsletter (Vogel (ed) 1973: 6) as a "somewhat depressed, cynical review" of the field's accomplishments (or lack of) and present health (or lack of), "not unrealistic in some areas and food for thought for us all, but don't let it get too deeply to you"; but this is a somewhat sententious view considering that American industrial archaeologists, on the evidence of their publications so far, are in exactly the same situation - albeit better and more professionally organized - as are their British counterparts, who are, as one critic has vividly put it, pursuing "a frantic eclecticism in which nothing is discarded and everything is enshrined on the altar of technological progress" (Symonds 1972: 82).

True, this overstates the case, and underplays the fundamental importance rightly placed on collection of data and preservation of monuments; but as Leavitt says, industrial archaeologists are object-centred, not subject-centred -

> It is the peculiar task of the historian to synthesize, to trace cause-and-effect, and to explain change in time. As yet, the industrial archaeologist does none of these things (Leavitt 1969: 591, 591-2).

If E.H. Carr is correct and history is the "continuous process of interaction between the historian and his facts, [the] unending dialogue between the present and the past" (Carr 1961: 30, 1964 ed), then not much interaction or dialogue is taking place and few people in industrial archaeology even appear to feel it should. Mayhew, Charles Booth, and D.H. Lawrence should be on every industrial archaeologist's reading-list.

On this point, curiously, Hudson and this writer would appear to agree, though for opposite reasons. Commenting on the address of the president of the American Society for Industrial Archeology to the first meeting of that society in 1972, which stressed the interdisciplinary nature of the new organization and its board of directors, Hudson observed that there was "no social historian on the Board, no artist, no poet" and that on both sides of the Atlantic there was an academic breed of industrial archaeologist locating, recording, and conserving monuments "with all the detached fervour of dedicated collectors of birds' eggs or antique furniture", interested only in the object and considering the "human associations that may cling to its edges...unnecessary and disreputable, mere mud that stops the chariot-wheels of science from turning" (K. Hudson 1974: 73). The whole argument is misconceived, for it is the lack of professionalism in industrial archaeology that is generating birds' egg and antique furniture collectors; while the social historians, artists, and poets appear to align themselves with the journal Victorian Studies, an eminently academic publication, rather than the journal Industrial Archaeology; but the point is nevertheless made: "human associations" are not being considered. It is sad that there appears to be no industrial archaeologist among the contributors to the recent multi-faceted two-volume epic The Victorian City: Images and Realities (Dyos and Wolff (eds) 1973), but when one looks at the variety of topics covered one wonders if many industrial archaeologists could have contributed much to it - indeed, one of the contributors, Raphael Samuel (Samuel 1973), editor of the "History Workshop" series published by Routledge and Kegan Paul, is cited by George Ewart Evans (1975: 189) as having done what industrial archaeologists have not done, namely shown that oral evidence and better still direct, written, accounts from the craftsmen or the workers of the machines can make a valuable contribution to the social history of what has been called the second industrial revolution. Evans's own forthcoming study of the kind of oral history that can be gathered in the town or city and the use of oral history in studying the coal-mining industry in South Wales (noted in G.E. Evans 1975: 219) is keenly awaited. With social historians now becoming more and more involved in industrial environments, and excavating archaeologists and others involved in industrial sites, buildings, and processes publishing in Post-Medieval Archaeology - for example, E.L. Jones's "The Reduction of Fire Damage in Southern England, 1650-1850" (E.L. Jones 1969); Coad's "Chatham Ropeyard" and "Two Early Attempts at Fire-Proofing in Royal Dockyards" (Coad 1970; 1973); Tylecote's "A Contribution to the Metallurgy of 18th- and 19th-Century Brass Pins" (Tylecote 1972); Tann and Smith's "Early Fireproof Housing in a Staffordshire Factory Village" (Tann and Smith 1972); Courtney's "Excavations at the Royal Dockyard, Woolwich, 1972-1973: Part I" (Courtney 1974); and Hay's "Houldsworth's Cotton Mill, Glasgow" (Hay 1974), to name only the most obviously "industrial" articles, have all appeared in that journal - the spectre of industrial archaeologists as "a reincarnation of the late 19th-century antiquarians" (Leavitt 1969: 592) and of industrial archaeology "becoming a resting-place for the the easily-satisfied, the successors of those earlier antiquarians whose ill-directed enquiries have posed such problems for prehistoric archaeologists in recent decades" feared by Crossley (1968: 138) has certainly not receded.

At the First International Congress on the Conservation of Industrial Monuments, a gathering of industrial archaeologists held at Attingham Hall near Shrewsbury in 1973, "It was left mainly to the Swedes, the single delegate from East Germany, and three left-wing West Germans" to put the cause of social and cultural implications of industrial monuments (Richmond 1973). The East Germans were quoted as saying "technological monuments are only of value in so far as they relate to man", which is essentially what both D.M. Smith and this writer have suggested; the Attingham Hall reporter observed that British delegates "went on showing slides of stationary steam engines." Buchanan notes (1972b: 27, cf 83, 116) that "social change can be judged from the ancilllary features of the industrial landscape - the homes of the workers, their public houses, parks, and chapels, all of which deserve and receive the passing attention of industrial archaeologists"; but the emphasis has most certainly been on the "passing" so far. If industrial archaeology is to develop, it is going to have to become interested in people, not by lessening its zeal for recording and preserving, but by broadening the scope of material recorded and preserved and by turning recording and preserving into something other than ends in themselves.

Particularly in a society where so much of the past is vanishing in the face of global industrialization and centuries or even millennia of accumulated tradition are being lost as time-honoured skills and memories cease to be passed on from generation to generation, it is important to record non-literate history. Industrial archaeology is a particularly useful way of recording non-literate history, but unless it is tied to people, their traditions, values, and how they lived, it is static and sterile. A song dated somewhere between the ninth and sixth centuries B.C. has Moses counselling the Israelites about to enter the Promised Land to

> Remember the days of old,
> think of the generations long ago;
> ask your father to recount it
> and your elders to tell you the tale
> (Deuteronomy xxxii: 7, trans New English Bible)

and in the late C19 a Palestinian informant summed up tradition, when asked by a European scholar how he knew what he had said to be accurate,

> From those who have lived before me I have heard it. It is not with you as it is with us - some are born and others die, and the old tell the young what they know? (quoted in G.A. Smith 1894: 138 n.6, 1931 ed 1966 reprint)

but that tradition itself is rapidly being lost in the Western world. George Ewart Evans, in one of his books on vanishing East Anglian rural traditions, notes (1956: 236-7, 1965 ed) a then middle-aged farmer observing that

> I often used to go into the stable on wet days, or for half an hour at the end of the afternoon, and listen to the old horsemen or stockmen talking. They'd pick on some incident that had perhaps happened during the day, and around it they'd build up a picture of one side of farming or of the life they led in their early days. But today there are few men on the farm to tell these youngsters how they used to go on in the past; and there's little opportunity to do so. And with the machine and television competing for their time and interest the young ones haven't much ear for the past either. There's been a more or less complete break; and it wasn't until I saw how little these lads knew about the old way of farming that I realized how nearly complete the break had been.

The trade of a wheelwright only comes to life when it is realized that the craftsman became so close to his work that he could recognize his products by the sounds alone of the waggon or wheels - Sturt remarks (1923: 134, 1963 ed) that people could tell by the sounds whose shop had hung the wheels and George Ewart Evans (1966: 170-1, 1971 ed) notes a wheelwright who could tell a waggon of his by its noise for after finishing the waggon he had someone drive it for a few miles while he walked behind listening to the sounds to make sure they were familiar. Such a level of intimacy with a manufacturing process is unlikely to be achieved again in our society. Kenneth Kilby in his account of the now-dying trade of coopering suggests (1971: 177) that in a generation or two a small boy may ask "'What's a barrel, Dad?'"; in October 1972 B.L. Fontana of the Arizona State Museum noted in a letter to the writer that he had passed a marked clay pipe fragment round a class of 35-40 students taking a museum course and not one of them had been able to identify it as part of a clay tobacco-pipe.

"Dead archaeology", as Wheeler says (1954: 13, 1956 ed), "is the driest dust that blows", and more recently Geraint Jenkins has made the same point, citing the importance of folk life studies for undertaking artefacts (J.G. Jenkins 1969). Peter Fowler also, talking about the pre-Roman British Iron Age, has reminded archaeologists that

> what worried Joe Celt was not whether he was conforming to the La Tène III norm on producing enough artefacts for statistical analysis but whether the spring would dry up this year, whether he could push his fields further into the woods, or whether his feckless neighbour at Dindun was going to curb his pyromania these coming winter nights (P.J. Fowler 1969: 124).

To quote from another of George Ewart Evans's books on East Anglian tradition, this time his recording of the memories of a man born in 1888:

> But the ordinary worker's dress for Sunday was a square-cut, long, black velvet jacket with short revers and about six buttons down the front; a very good cord trousers, medium drab in colour, and a bowler hat with a *set* (or straight) brim - the curly brimmed bowler was the wear for the *toffs*, the gentry. The makers of these bowlers always put a peacock's feather on the side of the hat. Every man liked a feather in his hat. Often a new bowler hat had a clay-pipe stuck in the band as well; or even a cigar. You could get a *sure-shot* cigar for tuppence in those days....
>
> Mention of the clay-pipe, though, reminds me that you won't have a complete picture of the old horseman or farm-worker unless you've got his old clay-pipe in. They were called Dublin clays; they were mostly made in Dublin, I understand [sic: Dublin in fact was a bowl shape - ICW]; but a tobacconist could have his name and so on stamped on them by the makers. They cost a halfpenny; and they used to sell them, and even give them away, in the pubs. There used to be a kind of competition among the customers to see who had the blackest pipe. This is what they used to do: as soon as they bought a new-clay they'd soak it in their beer. Then when they smoked it the pipe would turn black as your hat. They'd be unwilling to part with it when it got like that; and if the stem broke they'd smoke it even if it were only an inch long.
>
> They used a *tupenny ha'penny* shag in those days - two pence half-penny an ounce. It was made by Churchman's and

> was a real good stuff. I remember the smell of it as clearly as if I'd been near someone who was smoking it out there on the pavement. I'll tell you why. One morning when I was a young man I got up about four o'clock to cycle to Chapel St. Mary; and on the way there it was just getting light - a fine morning with the sun coming up and dew on the grass - when I got behind three or four farm-workers on their way to work. They all had their old clay-pipes going; and the aroma - I've never forgotten it - it was better than any cigar you'd like to mention.
>
> Another thing that's tied up with the clay-pipe is the old Ha'penny Screw. This was a halfpenny-in-the-slot machine. It was made of brass, about eight inches square. It's a collector's piece now, and would fetch a lot of money. You'd find them on the counter in the pubs. You put in a half-penny and you'd get out a screw of tobacco, about enough for three pipes (G.E. Evans 1960: 81-2, 82-3, 1967 ed).

This evocation of the past - the smell of pipes in the early morning was a vivid memory with George Sturt as well (Sturt 1923: 15, 1963 ed) - like that in the superb Victorian photograph of three men with their tankards and pipes outside a London pub in 1877 (Betjeman 1969: fig 125) should be the ultimate aim of history and archaeology.

In the preface of his The Making of the English Working Class, E.P. Thompson criticized the "Pilgrim's Progress" historical approach taken by some historians to the period, whereby it is "ransacked for forerunners-pioneers of the Welfare State, progenitors of a Socialist Commonwealth, or (more recently) early examplars of rational industrial relations" because

> Only the successful (in the sense of those whose aspirations anticipated subsequent evolution) are remembered. The blind alleys, the lost causes, and the losers themselves are forgotten.

Thompson went on:

> I am seeking to rescue the poor stockinger, the Luddite cropper, the 'obsolete' hand-loom weaver, the 'utopian' artisan,...from the enormous condescension of posterity. Their crafts and traditions may have been dying. Their hostility to the new industrialism may have been backward-looking.... But they lived through these times of acute social disturbance, and we did not. Their aspirations were valid in terms of their own experience; and if they were casualties of history, they remain, condemned in their own lives, as casualties (1963: 12, 13, 1968 ed).

In as much as it is possible in a study of this kind, the writer has tried to keep this in mind when studying the manufacturers of clay pipes and their craft, both in the times of their prosperity and in the times of their decline into obscurity.

Endnotes

CHAPTER 1: BACKGROUND

1 Much of the whole argument was singlularly witless, but Foley's observations in the first-listed article that anthropologists would call the Industrial Revolution "a 'florescent' or possibly a 'climax' period" and that the term Industrial Revolution "is restrictive in scope and implies denial of an historical-cultural continuum" are bons mots worth remembering for after-dinner chat over cigars and brandy.

2 For example, out of the 55,000 clay tobacco-pipe fragments found during excavation at Jamestown, Virginia, only three or four entire stems were found (Harrington 1954: 1st page), and no mention is made of any whole pipes at all. Only in extremely favourable conditions are whole pipes likely to be found on archaeological sites, the three recovered from a mid-C19 privy at Paterson, New Jersey (C.I. Wilson jr 1975: 41, fig 4-4), for example probably having been accidentally lost in the privy and preserved intact because of the relatively protected nature of such deposits. In certain circumstances pipes from underwater sites can be remarkably well preserved, for example the over 250 pipes recovered from the remains of a wooden box where they had been packed in regular fashion head to tail in a packing apparently of some form of seed pods on a mid-C17 shipwreck of a Dutch East Indiaman off the coast of Western Australia (Green 1973: 283).

3 What appears to be a heavily-corrupted version of this quotation is given in Laughton 1923: 19. In this version the broken pipes were on a shelf in the room and "about a ton of tobacco ashes" was in the hearth.

4 Tennyson's pipe-rack, complete with pipes, is in the Isle of Wight Museum at Carisbrooke Castle (seen there by this writer September 1973). The pipes are short-stemmed, the bowls undecorated except for a line of dots below the rim. A 1900 price-list of Scottish-made pipes (Anonymous 1900: passim) notes a type of pipe called a Tennyson: this may, of course, refer to a pipe with his bust moulded on the bowl - the prices given do not suggest the elaborate pipes with their bowls moulded in the form of a personality's head - but it may equally well refer to a type favoured, or allegedly favoured, by the poet.

5 But he forgets that up to 1752 the year began on 25 March, so that dates between 1 January and 24 March are a year later than they appear: for example, William Cissoll, F 19 February 1660 (O.S.), leads the list of those free in 1660 when he should head those free in 1661.

6 It should also be noted that the type 7 shape, with its straight- or relatively straight-sided bowls, has also been ascribed to Dutch

influence (e.g. O'Neil 1961: 378).

7 Since this was written, Mr Southorn has restarted manufacturing clay pipes, though so far only small ones (Atkinson _in litt._ 19 August 1974).

8 That Woodstock pipes were a popular variety is suggested by several found on American sites bearing the name of the firm of W. Demuth and Co. of New York City. Fort Saunders, Wyoming, occupied 1866-82, produced three marked REAL WOODSTOCK PIPE, two of them with 122 W DEMUTH & CO on the opposite side of the stem and one with the same inscription but the number 83 (R.L. Wilson 1971: 26, 44, 71 fig 25,A-B, 76 fig 31,A), indicating at least two varieties of the type, the number 83 example having a smaller bowl. Another fragment, but with no number noted, came from Fort Berthold I, North Dakota, occupied 1845-62 (G.H. Smith 1972: 105 fig 54, f, 107). The New York City trade directories first list William Demuth as a clerk from 1858 to 1862; from 1863 he appears as a company, being listed as "importers" 1863-64, then as "importer of smokers' articles" 1865-68 and finally as "pipes" (sic) from 1869 onwards, at which time Isaac and Moses Demuth became associated with the firm (New-York Historical Society _in litt._ 6 March 1974). In 1937 the Demuth firm, which by that time had already left the Demuth family, was acquired by the firm of S.M. Frank and Co. Inc. of Yaphank, New York state, who still continue to manufacture and import brier pipes (S.M. Frank and Co. Inc. _in litt._ 14 March 1974). From the trade-directory entries cited above it is not absolutely certain that the Demuth firm _made_ pipes, but one source (William Bonner, _New York, The World's Metropolis_ (1924), cited by the New-York Historical Society _in litt._ 19 March 1974) claims the company manufactured pipes from 1862, while another (Anonymous 1962b) claims that Demuth, "a pupil of Edward Hen, began the making of pipes in 1861". Edward Hen, the same account states, was "before 1860...almost the only importer of note [of pipes]; [and] was known as the pipe man of the United States". It is possible Hen both imported and latterly made pipes, and that Demuth took over his master's business; a commencing date at the beginning of the 1860s for Demuth's manufacture of pipes, or for that matter simply the marketing of Demuth-marked pipes produced elsewhere, would not disagree with the dates of the two sites noted above producing Demuth Woodstock pipes. A badly-worn stem fragment with DEMU- on its left side and IC on its right recovered at Old Sacramento, California (Humphrey 1970: 30, 29 fig 45) may also be a Demuth product: the Old Sacramento site was well dated to 1846-52, which on the above evidence would be too early for Demuth products, but the site cannot have been entirely free from later material, for it also produced a Davidson of Glasgow stem-fragment (Humphrey 1970: 15, 16 fig 3) which cannot be earlier than 1862 (see 4: IV). Unfortunately, no Demuth records have survived; indeed, even the family appears to have died out (S.M. Frank and Co. Inc. _in litt._ 14 March 1974). (If Demuth's Woodstock pipes were produced for the firm by another maker it does not appear to have been by any of the Scottish firms whose pipe-types appear in a price-list of 1900 (Anonymous 1900), for none of the mould-numbers 83 or 122

listed are Woodstock pipes.) The American Clay Pipe Works of New York City, which manufactured clay pipes until 1959 and subsequently had them made from their moulds by McDougall's, at one time produced three styles of Woodstock pipe - a Heavy Woodstock, a Small Woodstock, and a Large Woodstock (FIG 8 centre) (American Clay Pipe Works in litt. 6 and 20 December 1965; Anonymous n.d.[11]: 15). A Woodstock pipe is still produced in brier (FIG 9 btm) (Anonymous n.d.[10]; Herment 1954: 34 fig 9, also back cover, 1963 ed), but as can be seen from a comparison of the illustrations the brier Woodstock only remotely resembles the clay Woodstocks.

9 "Rifle" here presumably indicates a stylistic variation of the Volunteer pipe, akin to other prefatory terms such as "Acorn" Balm, "Plain Field" Balm, or "Town" Balm; or "Lily" Crop, "Melbourne" Crop, "N. Basket" Crop, or "N.L. Basket" Crop, to quote only a very few of the terms appearing in the 1900 price-list. However, elsewhere in the same list, as again with others of these terms, "Rifle" is used as a type name - e.g. Rifle, and Long Rifle - with the variation (as in the latter example) again indicated by a preface. Unfortunately, the meanings of many of these terms are now lost, probably for ever unless more illustrated catalogues than this writer knows of can be located or whole pipes are found with either their names or their mould-number and maker's name on them.

10 The publication of this writer's note on Ralegh pipes (I. Walker 1972b) resulted in several pieces of correspondence regarding examples or possible examples found. Oswald (in litt. 4 and 11 October 1972) notes examples from Queenshithe and Aldgate in London, Plymouth (see also Oswald 1970a: 140, 141 fig 59,79), Bristol (at Torquay Museum, not seen there by this writer), Nottingham, Leeds, and Edinburgh. The Edinburgh specimen, a bowl, is a very devolved representation, while a bowl from Nottingham was schematic in design almost to the point of non-recognition, though a clearly-moulded stem-fragment showing the crocodile's mouth also comes from Nottingham. The Nottingham stem, however, and that from Leeds, were associated with C19 material, and so may date to that period. Atkinson (in litt. 5 September 1972) notes an example from Lyme Regis, another from Bramber in Sussex, and also has one in his possession from Copenhagen, where they are known to occur (cf Atkinson 1972d: 179 n.9), presumably as Dutch imports (cf 3: II and VII). All these examples were datable on typological grounds or by associated material to the second half of the C17. Yet another Ralegh pipe fragment has recently turned up in the collections at Poole Museum (Cooksey in litt. 29 November 1972); its find-spot is unknown, but presumably it is local. It is perhaps significant that so many of the British finds are coastal: if they are not Dutch imports they may conceivably be local imitations by makers who had seen Dutch originals used by crews of visiting ships.

In North America four possible stem-fragments have occurred among surface finds at two sites in Lancaster county in Virginia (Mrs E.H. Beane in litt. 18 August 1972); and what may be a rather debased example of a Ralegh bowl occurs at the Sullivan site, a mid-C17 Oneida Indian site in upper New York state (Bennett and Cole 1973: fig 16,Q)

- in any event, the bowl has a stylized face facing the smoker and occurs with other pipe material most of which is Dutch.

Another recent find of a Ralegh pipe occurred during the excavation of the wreck of the Dutch East Indiaman *Vergulde Draeck*, which sank off the Western Australian coast in 1656 (J.N. Green 1973: 283-4, 283 fig 13,C).

Regarding the C19 example noted by this writer from the Thames with STEPNEY on its stem (I. Walker 1972b: 163), Atkinson (*in litt.* 5 September 1972) notes one found in Sussex stamped across the stem "BUSH & CO/29[?] Holborn/London", which must be the William Bush and Co noted in High Holborn 1859-62 (Bloice in Atkinson and Oswald 1969: 218), indicating that more than one C19 London maker was producing this form. That a memory of this type of pipe apparently extended from the early C17 to the second half of the C19 is extremely interesting, suggesting again the tradition-orientated nature of the pipemaking industry.

11 The increase in tax from 6s8d to 20s a lb in 1608 is given in MacInnes 1926: 52 - according to Anonymous n.d. [16]: 1st page, James *lowered* the tax to 1s a lb in 1608 and in 1615 (see above) raised it *to 2s a* lb.

12 According to Douwe Egberts of Utrecht marijuana was similarly used and this explains the drugged expressions on the faces of smokers in some early paintings of the subject. Adulterations were by no means confined to the C17: in 1715 an act was passed forbidding (with no great success, to judge by the continuing records of fraud) leaves, herbs, plants, or any other material to be coloured as or mixed with tobacco under pain of a 5s fine for each offence - or if one belonged to lesser classes such as servants and labourers, imprisonment with hard labour for up to six months - and also forbidding the mixing of snuff with ochres, umber, or any other colouring except a water solution of venetian red, or with fustic, yellow ebony, touchwood, ordinary wood, dirt, sand, or tobacco-dust (Alford 1973: 6); and Fairholt (1859: 58) and Sprunck (1957: 58) instance dozens of C19 adulterations.

13 "Stith's uncritical use of the official records [of the London Company] led him into serious errors of fact and interpretation..." (Wish 1960: 28).

14 Laufer gives 1602 as the date of Dekker's *The Guls Horne-booke*, but Dickson (1954:101 n.99) correctly gives the date as 1609.

15 Curiously, Morton does not actually name the firm he is describing, but there is no doubt as to its being Fribourg and Treyer as its location (though not its street-number) is given and much of his commentary is identical to information contained in Evans's book.

16 Jacques Savary des Bruslons died in 1716, and his *Dictionnaire universel*... was continued by his helper and elder brother Louis-Philémon (or Philémon-Louis - both versions occur) Savary and appeared in two folio volumes in 1723. The brother, who died in 1727, also produced a third, supplemental, volume, which appeared in 1730. The information contained in this work, therefore, must relate to the early C18 at latest. Various reprints and/or editions (the available

descriptions do not differentiate with clarity) followed: 1726-32 in four quarto volumes, 1741 in three folio volumes, 1744 four folio volumes, 1748-50 three folio volumes, 1750-52 five folio volumes, and in 1759-65 a "new" edition in five folio volumes (translated into English, the Dictionnaire universel... appeared, "with large additions and improvements", as Malachy Postlethwayt's The Universal Dictionary...Translated from the French of the Celebrated Monsieur Savary,..., 1751-55, in two folio volumes, a work which in turn went through its own series of editions). What is probably the first edition is quoted on p.152 below giving an observation identical to part of the entry in the 1759-65 ed; this latter entry has notes on rates of duty imposed variously in 1739, 1745, and 1751, but it is probable that the basic entry is the same as that in the first edition, in which case the information will still be basically that of the early C18 at latest (the quotation on p.152 is cited as coming from the 1726 edition, but it is probably from the first, 1723, edition as the bibliographic date given for the citation refers to the 1726 edition as being in two volumes and published in Paris, which would agree with the first edition but not with the 1726, second, edition which was published in four volumes in Amsterdam). It is almost certain that the Dictionnaire domestique portatif,... account published in 1764 is an unacknowledged copy from the Dictionnaire universel... entry, either from the 1759-65 ed - the volume with the entry on pipes appeared in 1761 - or from an earlier edition or reprint (for bibliographic details on Savary des Bruslons see his entries in the Catalogue général des livres imprimés de la Bibliothèque Nationale: Auteurs vol CLXIII and Quérard's La France littéraire,... vol VIII).

17 Alford's comment (1973: 111) that "Smoking carriages on railways were first introduced in 1868" is thus misleading; an illustration of 1846 to mark the Eastern Counties Railway's introducing these carriages and showing their interior is reproduced in West (ed) 1953: 34, as is a contemporary cartoon showing three of the four occupants of such a carriage smoking and one of them complaining of the fourth to the guard: "Guard, here's a man not smoking".

18 Despite this, Ure was one of four eminent chemists of the time retained by the tobacco-manufacturers to fight the Pure Tobacco Act of 1842 which forbade any additives apart from water (and vegetable oil for making roll tobacco and certain alkaline salts and scents in snuff). With the relaxation two years previously of the law on additives in tobacco, saccharine matter had become the most common; Ure, who was on record as stating flatly that in many cases adulterations in tobacco could not be detected by known chemical means (the Excise Department having produced its own experts to prove the contrary), and the three other chemists conducted tests which showed random samples of tobacco leaf could contain from 0.75% to 2.06% natural fermentable sugar. However, these findings did not obtain the repeal of the act, which in many essentials has lasted to the present day (Alford 1973: 81-7).

19 Also grandfather of James Kenneth Stephen (1859-92), suggested by some

to have been Jack the Ripper, tutor at Cambridge to Prince Albert Victor, Duke of Clarence and eldest son of the future Edward VII, who also died in 1892 and has also been identified as Jack the Ripper (C. Wilson 1975: 25 and Rumbelow 1975: 206-19).

20 At one point Alford, talking of the earlier 1840s, says "cigars were only just becoming fashionable, thus accounting for no more than 2 per cent of tobacco consumed" (1973: 84); and on another occasion (*ibid.* 171-2) he claims that cigar-smoking was increasing in popularity in the 1880s and 1890s, but neither of these statements appear to be borne out by the available evidence.

21 Vicarius is presumably the Dr Johann Jacob Franz Vicarius (note name order) or Johannes Jacobus Franciscus Vicarius (B 1664, D 1716) who wrote a number of medical treatises in Latin published in Germany at the end of the C17 and beginning of the C18. According to Gurlt and Wernich (1934: IV, 746, 1962 ed), Vicarius was born at Lauf(f)enburg, studied at Freiburg, and was successively *Physicus* at Waldshut, professor of medicine at the temporary university of Constanz, and professor of medicine at Freiburg. Haller's *Bibliothecae Medicinae Practicae* (1788: IV, 68) notes a work by Vicarius entitled *De tubo tabacario orientali, in quo per aquam fumus transit*, suggesting Vicarius did indeed have an interest in smoking.

22 Bastien (1973: 3rd chapt) quotes somewhat different figures for annual production "*pour la période 1850-1870, de la petite ville allemande de Ruhla*":

Pipes en véritable écume de mer	570 000 *pièces*
Pipes en écume imitation	500 000 *pièces*
Fourneaux en porcelaine	9 600 000 *pièces*
Pipes en bois	5 000 000 *pièces*
Pipes en terre	3 000 000 *pièces*

These figures may in fact be rounded-off approximations of the above, with the exception of the number of artificial meerschaums, where there is an error one way or the other of a zero, if nothing else. As neither the *Encyclopaedia Britannica* nor Bastien cite their sources it is difficult to decide which is correct, but in the C19 the *Encyclopaedia Britannica* was a reputable source of information and is probably to be preferred here.

23 Hence, through a confusion with the wild rose brier or briar, the term brier or briar pipe - the older spelling (still given preference in the *OED*) for both plant and pipe is brier.

24 T.P. Cooper (1907: 98), when citing this, unfortunately gives the date for Fairholt as 1839, thereby adding to the confusion.

25 The identification of these stems as amber was confirmed by testing by M. Salmon of the National Historic Parks and Sites Branch's Conservation Division in Ottawa.

CHAPTER 2: MANUFACTURING PROCESSES

1 Both Duhamel du Monceau and Brongniart use variant spellings of these

and other place-names, which can lead to difficulty in identification. Elbeuf appears as Belleboeuf, for example. The Saint-Aubin mentioned is apparently not the suburb of Gournay-en-Bray of that name.

2 The spelling Liège was used until after WW I, when Liége became general. In 1951, however, the spelling Liége was made official. The adjective, however, is, *liégeois*.

3 Bastien incorrectly spells this Neuchâtel-en-Bray.

4 For example, Coad (1970: 162), describing rope-making, notes that Rees's *Cyclopaedia* (1802-20) quotes almost verbatim Steel's *Rigging and Seamanship* of 1794, in one part describing a process in use in 1794 but already about to be replaced by a method first patented in 1793, improved in 1799, and in use from that time, well before Rees was publishing his account. Celoria (1973: 11, 20ff), warning that "an adaquate description of a process in use around 1856 might use an illustration pillaged without acknowledgement from a publication of several decades earlier" and that "a competent description of a typical potter's wheel published in the 1850s might use a drawing taken from a French work of the 1840s", cites a number of examples of this particular hazard (cf comments on encyclopaedia accounts noted on pp 174-5 and 177-80 below).

5 There is no evidence that British pipemakers used any of the care lavished by the Gouda pipemakers on preparing their clay, and it is probably significant that Celoria, in his recent survey of C19 ceramic machinery used in The Potteries and other parts of Britain, observes that "Pug-mills are difficult to document from before 1800" (Celoria 1973: 32). He notes (*loc. cit.*) an early horse-operated example in a publication of 1805, and a number of mid-C19 descriptions and illustrations (*ibid*. 32-5) suggest the machinery used at this time was essentially the same as that illustrated by Duhamel du Monceau as being used at Gouda.

6 According to the caption for pl XVI, however, the depiction is of unfired pipes being taken to the pottery for firing. The peculiar manner of walking when delicately carrying the fragile load was known as the *pijpmakersdrafje* - "pipemaker's trot" - which expression apparently still survives in Gouda to refer to a peculiar gait of anyone.

7 The Hollandse IJssel is not to be confused with the IJssel which flows into the IJsselmeer (former Zuider Zee).

8 The ancient Greeks invoked the help of the gods for a successful firing and medieval potters offered prayers before firing their kilns (Kelso and Chorley 1943: 111-2); the C16 Italian, Cipriano Piccolpasso, described the lighting of the kiln thus: "Invoking the name of God, take a handful of straw, and with the sign of the cross light the fire" (quoted in Rhodes 1969: 189). Bernard Palissy, the C16 French potter, recounting the various problems of trying to fire a kilnful of pottery evenly and how when he solved one problem the opposite problem would arise, observed that he "blundered thus for fifteen or sixteen years: when I had learned to guard against one

danger I encountered another that I would never have thought about" (quoted in Rhodes 1969: 116). Kelso and Chorley (*loc. cit.*) give an excellent resume of the technical problems potters had to contend with in firing their wares.

9 According to one source (*Ons Heem* 1963: 185 n.1), the Dutch word for pipemaker as the Van Dale dictionary (the premier Dutch dictionary) spells it - *pijpemaker* - is spelt *pijpmaker* in Gouda (the Dutch for pipe is *pijp*, plural *pijpen*). The spelling *pijpmaker* is certainly used by Helbers and Goedewaagen in their *Goudsche pijpen* (1942), the standard work on the Gouda pipe industry; other studies of Dutch pipes are divided in their usage of these two spellings. However, the largest Van Dale dictionary available to this writer, the two-volume *Van Dale groot woodenboek der Nederlandse taal*..., 1970 ed, lists neither spelling, giving instead *pijpenmaker* - literally, pipesmaker - and this version also appears in studies of Dutch pipes.

10 This word causes problems. In the unpublished Gouda pipemakers' guild records it is noted twice (in its *directie* form) and in both cases - once in 1734 and again in 1761 - it appears quite clearly to mean the mark on the mould which indicated the end of the stem and showed the amount of excess clay to be cut off the wired roll with the *schenkertje* (see below). In both references the length of the stem when measured was to be the distance between the heel and the *directie*. The 1734 reference also indicates an alternative term to *directie* was *knoop* (knot or button). It should be noted that the pipemaking exhibition of the Douwe Egberts tobacco, tea, and coffee firm in Utrecht called the excess clay at the top of the bowl not *directie* but *huisje*, literally a little house. A possible solution is that the meaning of *directie* has been transferred from the mark on the mould at which the stem-end was cut off to the piece cut off at the mark, and thence to any piece of excess clay trimmed off. There is a particularly tantalizing reference in an entry in the Bristol Pipemakers' Guild Book, in a decision made in 1710 to standardize lengths of various types of pipes (see p.15 above), that Bristol makers would henceforth measure these agreed-to lengths so many inches "from the Heel to the direction of the Point": the "Point" is presumably the finished stem end (possibly a "point" marked on the mould as noted above to indicate the place where the excess clay was to be removed), but it is just possible that "in the direction of the Point" was a technical expression in the English pipemaking industry which was taken over to The Netherlands by English makers and there changed as the terminology became absorbed into Dutch so that the word "direction" came to replace "point".

11 Littré's *Dictionnaire de la langue française* (1956-58 ed) gives preference to the spelling *casette*, listing *cazette* and *gazette* as variants; the *Dictionnaire encyclopédique Quillet* (1968-70) prefers *cazette* and lists *casette* as the variant; it lists *gazette* with the meaning of a "coarse paste for enclosing pottery for firing". Neither lists *gassette*. An archaic meaning of *casette* is a small house, from which its use for saggar is probably derived; it is distinct from *cassette* a casket, instrument case, or money-box, though the etymology

of the two is undoubtedly the same.

12 Kasten means "chest" literally - in the sense of a box - as well as being used here for the item known in the English pipemaking term "chest". Whether this is coincidence or not is difficult to say. The Dutch term for a pipemaker's chest, as already noted, is schroef, literally, screw, and there is evidence that the English term screw was known in the C17 for a pipemaker's chest. It is therefore unlikely that "chest" in its pipemaking sense would have reached the Westerwald with the presumably Dutch founders of the pipe industry there; however, there might be a connection between kaster, the Dutch word for the moulder derived from a lost English "caster", and Kasten for part of the equipment used by the kaster based on a fortuitous similarity of words.

13 The identification of these three villages causes problems. Sommersdorf is presumably the village of that name ca.25 miles W of Magdeburg, though at this distance it is not really "near" Magdeburg, nor has it ever been within the Duchy of Magdeburg. No place by the name of Heidersleben is known, but Hedersleben 25 miles SW of Magdeburg, Hadmersleben 17 miles SW, and Emersleben (not found on maps) were all suggested and were all within the Duchy. (There is also a Haldensleben, 15 miles NW of Magdeburg, which was also within the Duchy.) The only known Herrenhausen appears to be the place now a NW suburb of Hanover, some 75 miles WNW of Magdeburg and like Sommersdorf never within the Duchy of Magdeburg, but a Hornhausen exists 20 miles WSW of Magdeburg and lay within the Duchy (based on information supplied by the Staatsarchiv Magdeburg, East Germany, in litt. 28 October 1970, and by the Braunschweigisches Landesmuseum für Geschichte und Volkstum, Brunswick, West Germany, in litt. 24 February 1971). These inaccuracies suggest Sprengel may not have been familiar with the area or even with the manufacturing method he describes; he also mis-spells Hildesheim as Hilderheim, reinforcing this impression.

14 Bivins, describing pottery manufacture at the Moravian settlement of Bethabara in North Carolina (for the origins of these settlers, and an account of their pipe manufacture, see Section VIII below) notes (1972: 78) a 1780 inventory reference to "3 clay sickles", unidentified tools which he suggests may have been used to cut large masses of damp clay into more manageable blocks. It is perhaps possible, bearing in mind the German origin of the Moravian settlers, that these sickles were in fact a tool similar in appearance and use to the Tonschneide.

15 Interestingly, Rhodes notes a lower limit for the size of kilns burning solid fuel (coal or wood) of not much less than the size deduced for Rømer's kiln. Ample space has to be allowed for the combustion of solid fuels in order to allow the necessary quantities of heat to be released, so that below a certain size solid-fuel kilns become impractical because too much of the total space has to be given over to combusion. A catenary-arch kiln design with a floor-space 3 ft 9 ins by 3 ft 4-1/2 ins and a maximum height of 3 ft 6 ins (the firebox is at one end, the chimney at the far end of one of the

side-walls, providing cross-draught circulation; neither firebox nor chimney is included in the above figures) is described as perhaps the smallest size that should be built for wood firing. The external dimensions of this kiln are 5 ft 8-1/2 ins by 5 ft, excluding the chimney (Rhodes 1969: 60, 224 fig 196, 225 and 228).

16 Curiously, the only Strong pipemaker recorded at Leeds by Lawrence (1974: 193) is a Frederick Strong recorded in 1893. A Benjamin Strong, pipemaker, voted in Derby in 1775 (Jewitt 1878: II, 62).

17 This term was also applied to the drying of sugar loaves in the sugar-refining industry before the introduction of centrifuge-drying in the middle of last century allowed the production of cheap bulk sugar in crystal form (Buchanan and Cossons 1969: 68; Stiles 1969: 11); to the drying of gunpowder in the early days of its manufacture before it was packed in kegs or put into cartridges (Marshall and Davies-Shiel 1969: 78, 84); and to a heating process in the present-day production of shag tobaccos (Anonymous n.d.[19]: 4th page; Alford 1973: 8).

18 Since this section was written, Southorn's have restarted production and two new small businesses, the Pilgrim Pipe Company at Skegness in Lincolnshire and Eric Ayto at Bramber in Sussex, have started (see p.262 n.4 below). Mr Southorn, who is at present producing only cutties, is looking for an electric kiln (Atkinson *in litt.* 19 August 1974), and while the other two businesses refused to give this writer any information on their production methods an inspection of the outside of their premises revealed neither a traditional kiln separate from the workshop nor a chimney likely to belong to one inside, suggesting they are using electric kilns. As noted in Section II above, the Van der Want firm at Gouda uses an electric kiln to fire its pipes.

19 Elsewhere, George Ewart Evans records the use of beer in Suffolk to stain furniture, describing one chair as golden-brown in colour from frequent stainings with beer (G.E. Evans 1956: 65, 1965 ed).

A more formal competition - that of seeing who could keep his pipe alight longest - is recorded by Hallgarth (1962: 33; 1969: 34) at various Lincolnshire village festivals, such as the annual race-meeting, the competitors being given a new Churchwarden and a fill of tobacco and the prize being a pound of tobacco. Under Pipe Club of Great Britain rules, clay pipes are used in present-day pipesmoking competitions held in the United Kingdom, the reasons being the much lower cost of clays and the certainty that all competitors are smoking pipes of exactly the same capacity. An incidental advantage is that a clay is much more pleasant to smoke than a new brier, which should be carefully "smoked in". European and World competitions, however, are normally run under the rules of the International Committee of Pipe Clubs, which specify brier pipes: these have to be specially made for each event in order to ensure identical capacity (Pipe Club of Great Britain *in litt.* 12 August 1975; cf coverages of the [British] National Pipesmoking Championship and of the World Pipesmoking Championship in, respectively, issues nos 22 (Winter 1974-75) and 18 (Winter 1973-74) of *Pipeline*, the quarterly newspaper of the Pipe Club of Great Britain, front pages, and other features in these issues relating to pipesmoking competitions). Interestingly, Canada's first pipe club, in London, Ontario, is affilitated to the PCGB and used clays at its inaugural competition - shortly before the formation of this club, known as the Pipe Club of Canada, Gordon Pollock of the Manchester clay-pipe firm of John Pollock and Co (see above) had visited interested smokers at London during a North American sales trip (Pipeline no 22 p.6; Pollock in litt. 9 August 1974).

20 Such terms, of course, were not unique to the pipe-making trade. The Lithgow Valley Colliery Company's Pottery Works in Lithgow in New South Wales noted in its 1889 and 1895 catalogues not only that "No risks of carriage will be taken by the Company, nor will allowance be made for breakage or loss in transit" and "N.B. - All risks of Carriage must be borne by Consignees" but added that "All crates or cases will be charged for, and no allowance can be made for returns". In the firm's ca.1906 catalogue it was noted that

> All goods are delivered into trucks at Lithgow Railway Station or into carts at the Company's Works. All risk of carriage must be borne by consignees.

which together with the 1889 catalogue's including two pages of rail rates from Lithgow to a large number of places (up to 281 miles distance) for various categories of goods presumably indicate the goods were delivered FOB Lithgow railway station (Birmingham and Fahy 1974: vii, 3, 5, 34, 35, 62, 28-9).

21 There is no known connection between this John George Reynolds and the Bristol maker John George Reynolds noted 1849-56. Interestingly, at the time of the 1851 census the London Reynolds was staying with a Boston pipemaker, John Chennery (P.K. Wells 1974: 1) - presumably he was only visiting, for he is not known to have worked in Boston and his business is noted in London from 1828 to 1882 (Bloice in Atkinson and Oswald loc. cit.).

22 However, Bloice (loc. cit.) lists a William Boorman a pipemaker in Whitechapel in 1869, so it is possible this Boorman had taken over Thomas Balme moulds, adding his own name but neglecting to alter the heel-marks.

23 A pipemaking firm of William Bush and Co. of London is recorded 1859-62 (Bloice in Atkinson and Oswald 1969: 218; cf also n. 10 above) but there seems no reason why there should be any connection between the two Bush firms. As pipes appear almost invariably to have been sold directly to a retailer, or exported directly to the country involved (p.155) , any agent's name on a pipe seems much more likely to refer to an agent at the distributing end than at the shipping end.

24 The Glasgow firms listed are Christie, Davidson, McDougall, Waldie, and White, 5 of the 11 Glasgow firms still working at this time (see Appendix VII). No names are given for the Edinburgh and Aberdeen firms; at present the writer has little information on Aberdeen pipemakers, but there were six Edinburgh firms still surviving in 1900.

25 A similar sort of confusion, though this time wholly based on a

misreading of the source used, occurs when Graves (1969: 52) says that the Dutch admiral Van Tromp had a mahogany pipe inlaid with brass which "opened with a spring on its heel and a hinge on its upper part" and latterly came into the possession of Sir Hugh Walpole. In fact Fairholt (1859: 171), who is being quoted here although Graves does not cite his source, specifically refers to the item as a pipe-case and even shows it with a pipe inside.

26 George Spencer Watkinson jr, a pipemaker in the second half of last century at Market Rasen in Lincolnshire, notes in his journal that some inns gave tobacco - then 3d an oz - free to their customers though others had dispensers in which the customer put a 1d in order to open it (Hallgarth 1969: 34). One of George Ewart Evans's informants, recalling times about the beginning of this century, referred to these dispensers as Ha'penny Screws, a halfpenny buying a screw of tobacco "about enough for three [clay] pipes" (G.E. Evans 1960: 82-3, 1967 ed); and at the turn of last century a rhyme current in the St Jude's pipemaking ghetto in Bristol included the line "'Alfpenny screw in a farthin' pipe" (see p. 750 below). These dispensers are also noted by Fairholt (1859: 231-2) and A. and C. Scott (1966: 70).

27 But some unlikely combinations of occupations turn out to have entirely logical reasons: in Bath, Wilcox (1971: 25-6) notes that C18 brewers were frequently involved with the carrying and coal trades and with pig-farming because the first two involved, like brewing, heavy transport, yards, stabling and carting facilities, and tackle for lifting heavy loads, while the third proved a profitable sideline to use the grain, malt, and hops which remained after the brewing process.

28 Brabner is a new edition of C. Knight; for full details see entry in Bibliography under Brabner.

29 A variety of other uses for clay pipes or clay-pipe fragments is known. An early C18 source recommended placing pipe-bowls on the tops of sticks supporting carnations so as to "kill the Vermin which will lodge in them every Morning" (Richard Bradley's *The Family Dictionary* (1725) trans and rev from N. Chomel's *Le dictionnaire oeconomique* (1st ed 1709) s.v. Carnations, quoted in A. Noël Hume 1974: 23 and 25). Savary des Bruslons (1759-65 ed: IV, col. 200; the account is repeated in Roux *et al* 1762-64: II, 357) recorded that a well-seasoned pipe - "*Pipe grasse*...*d'un brun obscur presque noir*" - ground up and taken in white wine was accounted by some to be "*très spécifique pour le flux de sang*" (this may have acted as a primitive Kaopectate, where kaolin is used to coat the inflamed colon - the ballclay of the ground-up pipe would have taken the place of the kaolin, with the wine being the medium of suspension. The alcohol in the wine would also have dissolved nicotine and tobacco tars from the granulated pipe, and while the tars would have no particular short-term effect on the patient the nicotine could have been taken for its pharmacological effects.) An East Anglian horseman born in 1889 an still alive in the late 1960s recalled some old men curing a horse of hard mouth by putting a heated pipe-stem on the side of the horse's mouth. This was

a very cruel method - though the more normal use of oil of vitriol sounds hardly less so - but deemed necessary if the horse was vicious and could not be used (G.E. Evans 1969: 114, 1974 ed). A more pleasant use for pipes is cited by Mayhew (1861-62: I, 12, 1968 ed), who noted London costermongers in the mid-C19 doing a "pipe-dance", where about a dozen pipes were laid close together on the floor and the dancer placed the toe of his boot between them while keeping time to the music. With the decline of the clay pipe in modern times unusual uses for it have lessened, but one enterprising figure photographer has used a clay pipe as a prop, a certain Elvira recently appearing in Men Only fetchingly displayed in one shot with a Churchwarden (R.C. Clarke 1974: 38). No list of uses to which clay pipes could be put, however, would be complete without noting the one in the diary of Nicholas Blundell of Little Crosby, nr Liverpool, where he described in 1720 having been regaled at Preston by an individual "Playing Trumpet Tunes upon a Tobacco-pipe" (Tyrer and Bagley (eds) 1972: 21). That pipes were used to make penny-whistles seems certain from the recovery of a stem-fragment, unfortunately unstratified, with three circular holes along one surface, from a tinglazed-earthenware kiln-site of the period 1680-ca.1737 at Lambeth (Bloice 1972: 140); a probable example - the illustration does not show the apparent finger-hole quite clearly enough to be certain, though what appears to be this hole lies in a groove on the top of the stem - with bowl attached from Amsterdam and datable to the first half of the C17 (Sleen 1963: 263); and more than 30 fragments with from one to three holes ground or filed into the side from mid-C17 contexts at Fort Orange and Beverwyck under present-day Albany, New York state (Huey 1975). (Huey's reference (1975: 110) to the Lambeth kiln-site find noted above being from the possible site of a Dutch potter's workshop is a misinterpretation of the evidence in Bloice's article; however, James Barston (D 1693), the first owner of the pottery, did have a Dutch apprentice and several Dutch journeymen working for him (Edwards 2974: 35 and refs)).

30 The word "cantril" is not listed in the OED, J. Wright's The English Dialect Dictionary, or dictionaries of earlier English consulted by the National Library of Canada, Ottawa.

31 Oak-Rhind and Oswald have recently examined a number of C17 and C18 Dutch and English bowls for these striations, but with uncertain results so far (Oswald in litt. 10 October 1973).

32 According to a 1900 price-list for Scottish-made clay pipes (Anonymous 1900: 29), White's of Glasgow produced two pipe styles called a Large Hayti and a Small Hayti (their numbers 437 and 438 respectively). Unfortunately, no bowl forms are at present known for these types, but it would be interesting to know if they resembled in any way the "Hayiti" forms illustrated by Heite (1972a: 212 nos 5 and 6) and the Hamiltons (1972: 42 pl 18,Q) - as noted below, it is said that Pamplin pipes at one time were exported to Britain and Europe.

33 Fleming actually refers to "delftware". Tin-glazed earthenwares have a variety of names the use of which is sometimes ambiguous, but in ceramic and archaeological circles the term "tin-glazed earthenware"

is used for the British product; "delft" for the Dutch; "faience" for the French and northern European material such as German and Swedish; and "maiolica" (the i pronounced as a y) for Italian, Spanish, and Mexican. The term "majolica" is restricted to C19 imitations of Palissy ware.

34 The reference in 1969c should probably read figs 11 and 12, certainly not fig 10.

35 Lachapelle-aux-Pots is referred to by Brongniart as Chapelle-aux-Pots, St-Samson as St-Sanson.

CHAPTER 3:
HISTORY OF THE CLAY PIPE INDUSTRY

1 For a similar argument - as to whether tobacco and smoking (amongst other items) reached Africa prior to Columbus reaching America - recently conducted, see C.T. Shaw 1960: 277-89 and passim; Inskeep 1962: 174-5; C.T. Shaw 1962; Jeffreys 1963a; Ozanne 1963: 52-60; C.T. Shaw 1964; Jeffreys 1964; Ozanne 1969; cf Jeffreys 1963b, and 1971 with comments.

2 Earl is presumably an error for Marquis: the Marquis in question was the third, who was also fourth Duke of Somerset; he died 21 days after the date of William Gauntlett's lease, and with him the marquisate became extinct.

3 One source (Anonymous 1954a: 1st page) says that the last York firm, given here as G. Waddington and Sons, apparently closed "one or two years" after 1933 and another source (Anonymous 1967: 17th page), probably following the other, gives the date as ca.1933. A third source (R. Hill 1955), however, citing city trade directories, says that the Waddington firm, here given as Thomas Waddington and Son, were listed as pipemakers until 1921 but that they continued in business as drysalters until 1936. It is difficult to decide which account is more likely to be correct, but this writer tends to the latter. The crews of the three American aircraft making the first round-the-world flight in 1924 autographed clay pipes at Brough in Yorkshire while their planes were being overhauled by the Blackburn aircraft firm at their works there (Woodman 1973: 38); according to Woodman the pipes still hang in the bar at the Ferry Inn at Brough, but the present landlord of the inn, who has been there some 16 years, has no knowledge of the pipes (Dixon in litt. 16 October 1973).

4 Since this section was written, Southorn's have reopened (Atkinson in litt. 19 August 1974) and two small new businesses have opened, one in Lincolnshire and the other in Sussex. However, when visited by this writer in November 1973 the former - the Pilgrim Pipe Company at Skegness - proved to be completely unco-operative, even to the extent of refusing to show him their products. They did say they had been in business "for about two years". Eric Ayto, who has recently set up business at the "House of Pipes" museum at Bramber, near Worthing in

Sussex, also declined to reveal any of his manufacturing techniques when visited by this writer in October 1973, but he did say that they were all self-taught and that he was not familiar with any of the traditions of clay pipemaking; indeed, he indicated he preferred not to hear how other makers produced their pipes as he did not wish to experiment with any new techniques which might upset his present methods, which had been achieved through trial and error. Both in his reluctance to reveal his methods and in his lack of desire to experiment beyond them, Mr Ayto follows the tradition of the small craftsman who has mastered his own techniques by empirical testing: examples of pipemakers achieving a satisfactory technique and tenaciously keeping to it have been noted in Chapter 2 above.

5 According to a manuscript written 1693-1703, the conditions of service of sailors for the Vereenichde Nederlandtsche Geoctroijeerde Oost-Indische Companïe (Dutch United Chartered East India Company) included the supplying of pipes and tobacco (Sténuit 1974: 255 n.29). Recent underwater exploration and archaeology has found 15 wrecks of C17 and C18 Dutch East Indiamen from Norway and Shetland to South Africa, Mauritus, and Western Australia (Sténuit 1974: 253).

6 *Slegte* is the archaic spelling of the modern *slechte*, but by a change of meaning rather similar to that undergone by the word "custom" in English when relating to cars - formerly the word meant "special" but now "de luxe" has taken this meaning and "custom" means "standard" - *slechte* now means "bad". For this reason the older spelling is used here.

7 The possibility that this Dutch bowl form did find favour among east-coast Amerindians gains some strength from an extremely close copy in steatite from Virginia and another in stone from New York state (McGuire 1899: 454-5, figs 78,80). McGuire also illustrates (*loc. cit.*, fig 77) a "pottery" pipe of this Dutch bowl shape from Burr's Hill, Warren, Rhode Island - from where a Llewellin Evans of Bristol pipe is also said to have come (M. Brown III 1972: 10; see 6: VII(b)(4)). Despite a slightly odd description, it appears this pipe is conventional clay pipe; it has apparently no maker's mark, but has a rouletted rim to the bowl and possibly some sort of line round the stem. McGuire says it is English, but there is every indication it is not; as discussed in 6: VII(b)(4) Bristol and Dutch pipes of this period seem to occur together frequently on American east-coast sites.

Atkinson (1972d: 177) has suggested that the heelless but otherwise orthodoxly-shaped Dutch bowls noted by this writer from Louisbourg and elsewhere (I. Walker 1971c: 62, 66 fig 7, 71 fig 12) are Dutch "export only" pipes somewhat similar to the heelless Bristol pipes of the same period (p.13 above). Certainly a survey of illustrated Dutch material would suggest Dutch pipes always came with a heel, but this is certainly not invariably the case with Dutch material found in North America (cf I. Walker 1971c: 111).

8 It seems likely that two Dutch pipe-bowls found during the excavation of a well associated with the French Louisiana fort on the site of Mobile, Alabama- Fort Condé- originally belonged to the French period of occupation. Fort Condé was occupied by the French 1720-63 and

thereafter by the British, Spanish, and Americans until it was razed in 1821. The well was built between 1724 and 1731 but was cleaned out by the British when they took over in 1763. The two Dutch pipe-bowls, both with the Crowned 16 mark (Harris 1971: 71 fig 9, a-b and caption), came from fill associated with the Spanish occupation 1780-1812 but could have been redeposited from a French context, particularly as two Crowned-16 pipes datable to 1739-58 came from a casemate at Louisbourg, Nova Scotia (Omwake 1965b: 40,41), six from Fort Gaspereaux, New Brunswick, datable to 1749-56 (Wylie 1968: 8), and no fewer than 89 from Fort Beauséjour, New Brunswick, where almost two-thirds came from deposits probably associated with the French occupation there, 1751-55 (MacLean 1971: 21-2). However, a Spanish association cannot be excluded, as four Crowned-16 bowls came from the Spanish site of Santa Rosa Pensacola near Pensacola, Florida, and only ca.55 miles ESE of Fort Condé, all probably datable to 1739-63; and the bulk of the recovered pipe material from the site was Dutch, indicating the Spaniards when obtaining pipes used Dutch ones as did the French (Omwake 1965d: 44, 49). The two Fort Condé Crowned-16 pipes are closely similar to the Canadian French material, but not enough is known at present about Dutch bowl typology to say definitely that they are mid-C18 as opposed to late C18.

9 Bastien (1973: 3rd chapt) talks of one factory at Givet in 1848 employing 350 workers and that twenty years later this number had more than doubled, but this is probably an inaccurate summarizing of the above figures.

10 *Empoignant une chope à fortes cannelures,*
L'hypogastre et le col cambrés, une Gambier
aux dents,....

The reference is in Rimbaud's *Oraison du soir* (cf Jean-Léo 1971: 18; Herment 1954: 34-5, 1965 ed), not in a poem of Verlaine as Fresco-Corbu (1962: 1446) asserts, though Verlaine in his *Plus d'infirmière*... does refer to a Gambier (cf Jean-Léo 1971: 17-18);

Plus d'infirmière, plus d'infirmier:
Je suis un malade modèle
Qui fume à l'aise sa Gambier...
Et ma jambe reste fidèle.

Rimbaud also refers to the Gambier firm and to Jacob pipes in his poem *Paris*, indicating the association of Gambier pipes with that city even though they were not actually made there (see above). (Rimbaud text from *Rimbaud*: *Oeuvres* (Editions Garnier frères, 1960), the Verlaine from *Verlaine*: *Oeuvres poétiques complètes* (Bibliothèque de la Pléiade, 1962).)

11 Cf Verlaine in his *Tête de pipe*:

C'est une face avec un casque en cône tronqué,....

12 Rimbaud also uses the term "onnaing" to refer to a pipe (cf Jean-Léo 1971: 18) - in *A la musique*, written in 1870:

Epatant sur son banc les rondeurs de ses reins,
Un bourgeois à boutons clairs, bedaine flamande,
Savoure son onnaing d'où le tabac par brins
Déborde - vous savez, c'est de la contrebande; -

13 Bastien (1973: 3rd chapt) mentions the firm Hippolyte Léon Bonnaud, but claims it closed between 1920 and 1930, as, he says, did Fiolet, Duméril-Leurs, Gambier, and Scouflaire. These dates, however, are more or less inaccurate for all the companies named (see above). Bastien may be right, however, in claiming Hippolyte Léon Bonnaud had a major export trade, particularly to Africa and the United States, for a 1900 catalogue of the firm (Jean-Léo 1971: in end section of illustrations, no pagination) notes "articles spéciaux pour l'exportation". The firm's products, to judge from the catalogue, appear to have been entirely stub-stemmed pipes in red, brown, and black.

14 Jean-Léo (op. cit. 31) says 300 examples of these pipes were made, but in catalogue no 17 (1972) of Le Grenier du Collectionneur (item 449) it is noted this is an error, the correct figure being as above, 40.

15 The two sites are very close to each other but on opposite sides of a stream, and at one time both factories had owners by the name of Peterson (Thomas and Burnett 1973: 7). According to Thomas and Burnett (pp6-7) their site was owned by an N.S. Davis prior to the Petersons; according to Murphy (1974: 250) the Akron Smoking Pipe Company site was also owned by an N.S. Davis at this time, which suggests ownership of the sites, if not the sites themselves, has been confused.

CHAPTER 4:
PIPEMAKING IN VARIOUS CENTRES

1 This list remains the only comprehensive list of English pipemakers, though as noted above, considerable subsequent work has been done in a number of areas of England. Oswald 1970b: 227 gives revised numbers for makers now known in a number of regions, including Liverpool and the next centre to be considered, Chester, but as these numbers are given in half-centuries and not decades, as needed in this examination, the 1960 lists have been used here. The 1970 figures for Liverpool are 33 for the period 1700-50 and 86 for the period 1750-1800 - the comparable figures given above from the 1960 lists are 28 and 70.

2 Care should be taken in this reference and in others in Donnan to differentiate clay pipes from pipe beads, which latter appear on a number of occasions in cited texts.

3 According to Atkinson (1966: 276 n.2) whiting-manufacture was a common sideline of pipemaking - it appears to have been so at Worthing, Sussex, where putty-making was another sideline (Atkinson loc. cit. and 272, 273).

4 Berry (1963): 8) says that Swallows at Rainford nr Liverpool were producing over 15,000 pipes a day ca.1903, which for a six-day week gives a total of over 90,000.

5 The same indignity was inflicted on Charles I while imprisoned at Westminster during his trial there in January 1649 (Fairholt 1859: 110). Gardiner in his History of the Great Civil War 1642-1649 (Gardiner 1893 ed: IV, 318) notes that "Ever since the commencement of

the trial he [Charles] had been annoyed by the presence of soldiers drinking and smoking in his bedroom" but that Hacker, who commanded the soldiers, had been induced to give the king the privacy of his bedchamber a few nights before the trial ended, and this form of insult was not repeated. (This evidence comes from Hacker's trial, and the behaviour was probably out of vindictiveness, just as it was in the case of Montrose, where the notorious Weir of Hermiston ordered Montrose's guards to be with him at all times (Buchan 1928: 374).)

6 There does appear to have been a rapid acceptance of the clay pipe in both Scotland and Ireland in the C19, to the extent that today when clay pipes are mentioned the average person still probably thinks of Scottish and particularly Irish labourers (cf J. Peterson 1968: 13) and is very unlikely to know that in the C17 and C18 the Scots and Irish had been as famed for snuff-taking as they were later to be for using clay pipes (see 1: VII(b)). The association of clay pipes with Irishmen appears to have been well established by the mid-C19, for Rosen (1973: pl 406) identifies a man with a flat-topped conical hat and a pipe in an 1852 Punch cartoon "A Court for King Cholera" as representing an Irishman.

Fleming (1923: 237-8) recounts the use of clay pipes at wakes in Scotland and at the entertainment after the funeral, where pipes referred to as "wake" or "dredgy" (sometimes "dreggy") pipes were passed round the company. (Fleming gives the origin of the term "dredgy" from the word dirige as it occurs in the fifth Psalm in Latin, the sixth verse of which has the petition "Domine dirige nos" which Fleming says was repeated throughout the funeral service as an antiphone. "Dredgy", Fleming notes, was the name given to the feast after the funeral. As usual, Fleming is muddled - the phrase is in fact "Dirige, Domine, Deus meus,...and the reference is to Psalm 5 verse 8.) Certainly this tradition is still remembered, and Gregor, writing probably shortly before 1874 (the accounts had originally appeared serially in the London Scotsman and subsequently in expanded form in the Peterhead Sentinel) and describing "the olden time" in NE Scotland, notes the tradition of supplying new pipes and tobacco, "specially procured for the occasion", at wakes, which were sometimes irreverently known as "tobacco nichts" in consequence (Gregor 1874: 141, 1973 ed); Fleming (1923: 237, 238) notes that "Dredgies were in quite common use throughout Scotland a hundred years ago [i.e. ca.1820]" and that "About seventy years ago [i.e. ca.1850] 'dredgy' pipes were still in use in country districts". Even when he was writing, he continued, it was customary in some country places, "especially after the funeral of a coal miner", for there to be pile of new clay pipes on a table in his home, where the mourners would sit round and smoke in silence as a token of sympathy and respect for the deceased. As Fleming notes and as has already been recorded above, Burt in the later 1720s described smoking at wakes, observing that in the room "there are usually several Pyramids of Plumcake, Sweetmeats, and several Dishes, with Pipes and Tobacco; the last is according to an Old Custom, for it is very rare to see any Body smoke in Scotland" (Burt 1754: I, 230, 1874 ed). Elsewhere, as noted in 1:

VII(b), Burt indicates snuffing was the usual method of taking tobacco at this time, and his description of wakes certainly suggests clay pipes and smoking were largely restricted to wakes; but Grant in her *Highland Folk Ways* cites Sir Eneas Mackintosh of Mackintosh recording (in his *Notes, Descriptive and Historical, principally relating to the Parish of Moy in Strathdearn* of 1774-83) that in Strathdearn - the middle reaches of the Findhorn - at any rate the ancient custom of dancing at wakes had been abandoned by 1740 and when relatives and friends came to watch the body "plenty of whisky and snuff goes round, the young folk play at several country games while the graver sort tell tales of Ghosts and Hobgoblins" (Grant 1961: 368), which clearly implies tobacco was not smoked but perhaps also suggests that relatively sedantary behaviour, into which smoking could better, and perhaps later did, fit, had begun to replace more vigorous activity. However, Burt in another description of a wake, held for a Highlander who had died next door to his lodgings "within less than a Quarter of a Mile of Edinburgh, before I had been among the Mountains" (i.e. ca.1725), notes those assembled danced through the night, suggesting smoking and dancing existed together at wakes.

The association of clay pipes with wakes in Ireland is noted by 1832 (Weld 1832: 511), when it is recorded that the poor-quality pipes produced at Knockcroghery in Co. Roscommon in central Ireland were used chiefly at wakes, "where the low price, and the small quantity of tobacco required to fill them, insure them a preference". As late as 1939 and no more than 20 miles from Dublin, at Poulaphouca on the Co. Kildare-Co. Wicklow boundary, investigators recording local folklore prior to the flooding of the area to form a reservoir recorded that pipes, tobacco, and snuff were distributed at wakes among those who wished them, but that "wake-games", though remembered, were no longer played - one game recorded involved one of the players being sprayed with a mouthful of water (Ó Súilleabháin 1976: 204). The quasi-ritual overtones of this use of pipes might be worth examination by a folklorist - conceivably the special use of dredgy pipes goes back to a time when they, and tobacco, were rare enough to be used only on special occasions.

7 The addresses of these makers varies from St Mungo St to St Mungo Lane to South St Mungo St and back to St Mungo St, though the number remains the same. St Mungo St and St Mungo Lane are not the same, but here it seems likely the Directory entries have been confused.

8 Lafrenière and Gagnon (1971: 18) imply pipes marked "Murray-Davidson, Scotland" were found at a site in Quebec City, but their illustration (photo 63, p.91) does not bear this out. No such mark is known to this writer.

9 A stem fragment marked BANNE[RMAN] was found at the Hoyt-Barnum House site in Stamford, Connecticut (Poirier 1974: 13), but the absence of the place of work prevents certain attribution to the Glasgow Bannermans, there being a Montreal pipemaking family of this name in business from 1858 to 1907 (I. Walker 1971d: 25; see also pp359-61 below).

10 At the Montgomery Lake site Number 4, Ontario, in the upper Ottawa

valley, a stem marked McLean but with no place of work indicated was found (B.M. Mitchell *in litt.* 2 August 1969) and at the Grande-Chute site, Quebec province, also in the upper Ottawa valley, a stem marked P. McLEAN, again with no place of work indicated, was recovered (D.S. Robertson *in litt.* 4 and 11 July 1971). The Cuming Museum, London, has a pipe with R. McLEAN on one side of the stem and AQUARIUM on the other from Crieff in Perthshire, Scotland (Oswald files). As the bowl has newts or similar creatures on the front and rear mould-line the "Aquarium" presumably refers to this, not to the place of that name which occurs in the Astérix books. No McLeans are recorded as pipemakers in either Glasgow or Edinburgh; if they are Scots, the chances of their being, say, Aberdonians cannot be excluded as no work has yet been done on Aberdeen pipemakers though there certainly were some (cf 2: VII and Anonymous 1900).

11 The inscription McAVOY's LD is in very small fine sharp letters, a broken end of the stem running through the last letter. It has been impressed after moulding but before trimming by a hand stamp, and the letter-size and -shape are very close to the hand-stamped marks of the Broseley firms of Southorn and Smitheman. The LD presumably stands for Limited; whether it was followed by more cannot now be known, but the place of manufacture may have been added. This form of mark is unknown to this writer except on pipes of the Broseley firms noted aove and on an illegible fragment in Gloucester museum apparently of Gloucester manufacture (Gloucester pipemaking has Broseley influence), and - *across* the stem, not along it - a Ring of Bristol stem from North America; it has no known parallels in either Glasgow or Montreal material.

12 R.L. Wilson (1971: 29, 67 fig 15,e) notes an almost-whole TD pipe with 78 DIXON & SONS on one side and MELBOURNE on the opposite from Fort Fetterman, Wyoming, occupied 1867-82. A 1900 price-list of Scottish pipes (Anonymous 1900) indicates pipe-types with the name "Melbourne", to which this inscription presumably refers, in the same manner as the WOODSTOCK PIPE and VOLUNTEER marked McDougall products noted in 1: II(g). It seems most likely this is a Dixon's of Montreal product, but if so it differs from all those so far recorded with Montreal marked on them by having the & SONS following the maker's name. Dixon's, as noted above, was called W.H. Dixon and Co, and also the Canada Pipe Works, but there is no evidence so far for a name including "& Sons". However, no other maker's of this name are at present known. By a strange coincidence there is a HENDERSON'S-marked pipe in the W.D. and H.O. Wills Collection at Bristol: this example is at present unique in being of a buff-firing clay. Whether it was actually found in England is unknown. As noted in n.9 above a stem-fragment marked BANNE[RMAN] also occurred at the Hoyt-Barnum House site in Stamford, Connecticut (Poirier 1974: 12), but the absence of the place of work prevents certain attribution to the Montreal Bannermans, there being three Glasgow makers of this name in business in the 1840s, 1850s, and 1860s one of whom made the stem-fragment found with that name and GLASGOW on it in North Carolina (see p. 352 above and Appendix VII). Care should also be taken not to confuse Ford of Montreal pipes with products of

the London Fords who supplied the Hudson's Bay Company with pipes for much of the C19 and who are discussed in the following section.

13 Critchley and James, in their account of the Ratcliff Highway murders of 1811 referred to below, identify Ratcliff Highway with Stow's "filthy strait passage, with alleys of small tenements, inhabited by sailors' victuallers" (Critchley and James 1971: 6); but it seems quite clear from Stow's descriptions that here he was talking of recent riverside development to and beyond Wapping and that Ratcliff Highway was the road from the City to

> Radcliffe vp East smithfield, by [i.e. past] Nightingall lane [modern Thomas More St]...to the Mannor of Bramley...and to the Mannor of Shadwell,...[where] there hath been of late, in place of Elme trees many small tenements raysed, towards Radcliffe"...(Stow 1908 ed: II, 71).

14 On this plan White Horse St is consistently called Whitehart St. The White Horse inn, which still flourishes (FIG 133) near what is now the NE corner of Commercial and White Horse Rds, is marked as the White Hart. Presumably the road derives its name from the inn.

15 Miss Church recalls visiting her uncle, Ebenezer Church jr, and watching him mould pipe-bowls in the form of various notable people. Ebenezer Church jr was a great collector of pipes and had over 5,000 different specimens in his collection. According to a brief article by him in the 17 September 1928 issue of (probably) the London Evening News ("My Pipe Rack of Celebrities" by E.J. Church; original in Miss Church's possession, copy in possession of this writer), it included "pipes of every shape and size and pipes from every corner of the globe." After his death in 1931 his son, another Ebenezer, inherited the collection, but Miss Church has unfortunately lost contact with him; he was the Ebenezer Church recorded back at 23 Northdown St from 1931 to 1937 as an "Arth [sic] scientific instrument mkr", sharing the premises with a William Green, a laboratory apparatus maker who was there 1924-33 and whose business, as Green and Moseley, continued there up to 1935 (in fact, it is unlikely Church was there as late as 1937, for the 5 ft to 1 mile OS plan of that year shows nos 23 and 25 no longer standing and Miss Church (*in litt.* 20 April 1974) notes her research indicated the properties were demolished ca.1934). Ebenezer Church III subsequently moved to Colindale in NW London; if still alive he would be in his 80s, but he is not listed in the current London telephone directory. The reappearance this late of a member of the Church family in their former pipemaking premises in interesting, for it suggests the family continued to own this property until the end, presumably renting it out after 1894 - a number of businesses do appear at this address at various times after that date.

16 As observed in the preceding footnote, the 1937 5 ft to 1 mile OS plan of the area shows nos 23-25 Northdown St had been demolished by that date. However, this plan has random properties numbered, from which the exact position of nos 23-25 can be proved beyond doubt, and by superimposing this plan on the OS plan of the same scale of 1871, these premises can be shown to have been the two properties immediately south

of the architectural front shown in FIG 139. Comparing the 1871 OS plan with the 1819, 1813, 1807, and 1799 editions of Horwood's plan, it is almost certain that the unnumbered property shown on the 1819, 1813, and 1807 editions (which for this particular area are identical) on the west side of North St separated by a space about the size of one property from the rest of that side of the street to the south, which is numbered 9-15 running southwards, is the property in question.

There is, however, one complicating factor. Miss Church notes there was a passage between nos 23 and 25 and recalls her father telling the family it was originally part of a public footpath to Pentonville Hill: no reference to Pentonville Hill has been located (presumably the name is not old, as the Penton estates were only becoming built up and developing into a ville in the late C18 and early C19), but the 1871 OS plan does show a passage between nos 23 and 25 (then nos 27 and 28). It is depicted only as leading to the back of no 27, but could have originally continued west by way of the now built-over alleys of Crescent Place and Crescent Avenue into what was called last century Alpha Place but was subsequently renamed - presumably by someone with a sense of humour - Omega Place, a cul-de-sac running off Caledonian Rd. That there was indeed some sort of public footpath or right-of-way here is suggested by the gap in the development northwards of both the west side of North St and the east side of Providence Row (an alley west of North St and running parallel to it) shown on the 1807 and subsequent editions of Horwood and already noted above as separating what is believed to be the future Ford premises from the properties numbered 9-15 North St. However, the problem is that if this property first appearing on Horwood's 1807 plan were numbers 27-28 (23-25 after 1891) the passage should be shown running through the block, not immediately to the south. As the seven properties numbered 9-15 on the west side of North St in 1807 appear to correspond to the seven properties shown south of number 27 on the 1871 OS plan, number 9 (immediately south of the gap) cannot be number 27 renumbered: as number 27 has to be south of the gap, or at any rate south of the right-of-way, however, it would appear that either Horwood erred in placing the right-of-way or that the property appearing north of the gap on the 1807 plan is only number 28 (or perhaps in view of its size, numbers 28 and 29) and that number 27 was subsequently erected in the gap, with the passageway recalled by Miss Church being built to perpetuate the right-of-way.

The 1807 and subsequent Horwood plans show the east side of North St more or less developed up to the line of Collier St; the 1799 edition shows less development - only the first eight properties - on this side, but on the west side the only differences between 1799 and 1807 shown are the absence of the property identified above as probably the future Ford premises and the absence of the southernmost property (number 15) from the 1799 plan. However, while the 1807 edition shows the first eight properties on the east side numbered (northwards 1-8) and the first seven on the west (northwards 15-9), the 1799 edition does not number the properties on either side, possibly suggesting they were either in process of construction (which the absence of future number 15 would also suggest) or built but not yet occupied in 1799 but occupied by 1807. If so, and the same rationale was applied to giving numbers on the 1807 plan, it is possible the probable future Ford premises was only just about ready for occupancy in 1807; however, the 1813 and 1819 editions do not have this premises numbered either. This period, of course, coincided with the Napoleonic Wars, which checked building construction (George 1925: 88, 1966 ed).

John Ford and the Churches also owned nos 12-13 (pre-1891 numbering; nos 6-4 post-1891 and nos 3-2 on Horwood's 1807 and subsequent plans so far as can be determined) on the east side of the street; Ford had bought the properties in 1844 from a Henry Watson, wheelright, of South Mimms in Middlesex and in 1867 another John Ford, a corn-chandler of nearby 31 Leeke St, had sold them to Ebenezer Church (information from Miss E.J. Church in litt. 30 September 1973 and 20 April 1974); these numbers never appear in the directories and so presumably were always private residences. Miss Church also notes (in litt. 1 January 1975) that Ebenezer sr and Sarah Church had no fewer than 17 children as well as a number of servants, which latter reinforce the impression that the Ford-Church business was in its heyday a prosperous one. In the indenture of 1844 describing the sale of these properties to Ford they are noted as part of a development by one Samuel Coney on land leased him by Henry Penton as early as 1784 (what is now Pentonville Rd, off which North St was built, was part of the New Rd made across fields in 1756-57 to link Paddington and Islington (George 1925: 75, 1966 ed)).

17 Cullen's book, though written at times in an irritatingly journalistic manner, has good social background material on East London at this time; whether his theories on the Ripper are as good is, however, a different field of enquiry.

18 The calabash, with which Holmes is often associated, is not specifically mentioned in any of the stories in the traditional Holmes canon (M. Harrison 1958: 95, 1971 ed - in a calabash pipe the gourd is normally fitted with a meerschaum cup (Weber 1962: 36-7)). However, for an explanation of Holmes's calabash see the recently-discovered and newly-published Watson manuscript, The Seven-Per-Cent Solution (Meyer 1974: 107-8, 1975 ed). There are a number of references to "his clay pipe" ("The Adventure of the Blue Carbuncle") and "his black clay pipe" (The Hound of the Baskervilles, "The Red-Headed League", and "A Case of Identity"), with what is certainly the same pipe referred to again in the last-named story as "the old and oily clay pipe". In "The Adventure of the Copper Beeches" Holmes smoked "the long cherrywood pipe which was wont to replace his clay when he was in a disputatious rather than a meditative mood"; interestingly, however, when disguising himself as a "rakish young workman" in "The Adventure of Charles Augustus Milverton", Holmes also adopted a clay pipe, lighting it at the lamp before going out (all these stories, except for The Hound of the Baskervilles (1901-2) and "The Adventure of Charles Augustus Milverton" (1904), appeared in 1891 or 1892. Holmes also smoked a brier - "his old briar-root pipe" (The Sign of Four, 1890) and "an old brier pipe" ("The Man with the Twisted Lip", 1891) - and a "long

cherrywood pipe" (see above), as well as a pipe of unspecified material with an amber stem ("The Adventure of the Priory School", 1904) (in view of Holmes's comment elsewhere on the prevalance of sham amber (see p.627 below) we may be quite certain this pipe's stem was of genuine amber). Holmes also smoked cigars and cigarettes; he also took snuff.

19 She also had a "red cigarette case with white metal fittings", but no contents are noted.

20 Morrison, who was born in 1863 and lived until 1945, became an authority on Japanese painting and was also the author of a number of detective stories, including some recently republished and televised in "The Rivals of Sherlock Holmes" series (H. Greene (ed) 1970: 16 and chapts 2 and 4, 1971 ed; 1973: chapts 2 and 4, 1976 ed). For an account of what little is known about Morrison's life see Keating 1969.

21 The longest-occupied premises, or at least site, known to this writer on which pipemaking was carried out is probably that representd by the property now known as 21 George St in Colchester (Gant 1961b: 49; illustrated in Harley 1963: fig 11) and still standing. The last pipemaker in Colchester vacated these premises between 1907 (Christy 1907) and 1910 (Harley 1963: 36) and claimed in 1906 (Benham 1906) that the premises had been used uninteruptedly for pipemaking back to the seige of Colchester in 1648 during the Civil Wars. The same number on George St was certainly being used in 1801 by a long-time Colchester pipemaker and it is probably this premises that is noted in a sale of pipemaking implements in 1759 on this street (Harley 1963: 35-6). Gant (in litt. 31 August 1970) believes there is evidence to prove the tradition of pipemaking on the site back to the time of the Civil Wars.

CHAPTER 5:
PRODUCTIONS COSTS AND WAGES

1 A 1965 price-list for the products of the American Clay Pipe Works of New York (who after 1959 had had their products made for them in their moulds by McDougall's of Glasgow, so that the 1965 prices must reflect the cost of transporting the finished articles across the Atlantic) shows a remarkable range of costs, but excluding what amounted to miniature pipes (those with stems 3-1/4 ins and 3-1/2 ins long, which could be as cheap as $4.80 a gross, or slightly under 5 cents each), "TDs" with 6 ins stems sold at $8.00 for three dozen (ca.$2.67 a dozen); "Scotch TDs" with 5 ins and 6 ins stems cost $12.00 for three dozen ($4.00 a dozen) though these pipes were not available at the time the writer was supplied with the price-list; "Bog Oak" pipes with modelled harp and shamrock (presumably the type shown in the firm's undated catalogue Anonymous n.d. [11]: 6, 3rd from top) and a 4-1/2 ins stem cost $13.50 for three dozen ($4.50 a dozen); and "Churchwardens" of unstated stem length were listed (though again they were not available when the writer received the price-list) at $45.00

per dozen, or $57.00 for a dozen individually wrapped. Even the lower of these two Churchwarden prices is extremely high - $3.75 each - and must reflect the fragility of these long-stemmed pipes. (The price-list also had "Porous Clay Pipes" which coloured like meerschaums at $18.00 for three dozen of assorted styles, and three styles of clay pipes with "hard rubber" mouthpieces which were advertised as smoking like real meerschaum and cost $36.00 a dozen (American Clay Pipe Works in litt. 6 and 20 December 1965).)

In 1850, two gross clay pipes at Fort Union, New Mexico, were listed at a cost (i.e. wholesale) price of 33-1/3 cents a gross (ca.2 3/4 cents a dozen); and the following year two and a half gross at Fort Alexander, Montana, were listed at the same figure (cited in G.H. Smith 1972: 155). At Fort Laramie, Wyoming, clay pipes were sold in 1846 at 50 cents each (Beaubien 1951: 13, citing The Journals of Francis Parkman). The sources of these pipes, however, is not stated, so it is difficult to know whether these prices can be compared to mid-C19 prices noted below from English and Scottish sources. There is also the problem of converting meaningfully from American currency to sterling, and in addition to the cost of trans-Atlantic shipment (assuming a British origin) there would have been the probably very high cost of transport from Atlantic or Gulf of Mexico ports to the West, a cost which of course would have had to be borne even if the pipes had been made in the eastern United States or Canada.

2 The wording of the original is slightly ambiguous. It reads: "All Plugs Twopence per gross extra over and above the price of the pipe, and for all pipes made of prepared clay Fourpence per gross extra for straights, and Sixpence extra per gross for all bent bowls". This last could possibly be interpreted as meaning 6d a gross extra for all bent bowls regardless of the clay used, but this seems unlikely because "bent" pipes are already on the price-list (e.g. W. White of Glasgow's no 68 (Fig 9) called a Bent Harp) at costs per gross entirely within the average price range. Presumably "bent bowls" must have been more difficult to make with "prepared clay" than were "straights", which latter term one assumes means straight-stemmed pipes.

3 Later, when tabulating the capital and income of street-sellers of manufactured items Mayhew said (vol I, p.485) that as far as he could ascertain there were four "sellers of clay and Meerschaum pipes" in the metropolis.

4 Note however, that the connection between this firm, which is recorded in business from 1823 to 1876 (R. Hill 1964), and that of William White of Glasgow alleged by Fleming elsewhere (p.243) is probably incorrect - Fleming was probably thinking of the Edinburgh and Glasgow firms of Christie, which were connected.

5 Whatever "Hunter's Pipes" were, they appear to have been a long-lived variety and one popular in Canada, for the Hudson's Bay Company had them in stock in 1871 (ex info. Miss L. Sussman, Research Division, National Historic Parks and Sites Branch, citing Hudson's Bay Company Archives A.12/44). They are also listed - as "Hunters" - among the products advertised by the London firm of William Thomas Blake in 1877 (Fresco-Corbu 1964: 1289), and a 1900 price-list of Scottish pipes

(Anonymous 1900) notes at least two Glasgow firms, McDougall's and Davidson's, producing various types of Hunter pipes at that time. The prices given were variously 9d and 9-1/2d a gross, which was at the high end of the range for the average run of pipes listed. The same list also notes a number of Glasgow and other Scottish firms producing various "Huntsmen" pipes, though whether this is a related type is unknown. They were consistently listed at 9d a gross. Much earlier, in 1812, a group of Bristol pipemakers - Samuel Richards jr, Joseph Edwards jr, William Okely, Israel Carey 111, R.F. Ring and Co, and Ring and Cookworthy - were advertising "Hunters" at 1s4d a gross (photocopy of a sheet in the Bristol Pipemakers' Guild Book - original in private hands and not available for examination - noting "Hunters Ditto" at 1s4d a gross under an entry beginning "Ne..." but otherwise obscured which cost 1s6d a gross). Compared with other evidence for the cost of pipes at the beginning of the C19 these prices - ca.1-1/4d to 1-1/2d a dozen - seem low, but there is evidence (see below) that Bristol pipes as a whole were cheaper than, for example, London pipes at this time. An English brier pipe firm, The Falcon Pipe Group Ltd, produce a Hunter model of their Falcon pipe, one of their aluminium stem and humidome pipes, but Hunter here does not refer to a bowl form but to the quality of brier used, the Hunter being straighter grained and without the picking and patching treatment used, on their Falcon Standard bowls (Falcon Pipe Group Ltd in litt. 5 February 1974).

6 Probably all Hudson's Bay Company pipe-suppliers were London makers. Their suppliers for the period 1781-1806 were the firm of Pothill under a number of variant names (Pothill and Co, Rogers and Pothill, Pothill and Rogers, N. Pothill, N. and R. Pothill, N.R. Pothill; also Rogers or Rogers and Co alone 1790-92 and 1794): no Rogerses makers have been identified in this period, but N.R. Pothill is recorded 1800-05 - as Pohill - at Lower East Smithfield, East London (Bloice in Atkinson and Oswald 1969: 223).

CHAPTER 6:
BRISTOL

1 Another example of duplication from the Bristol Apprentice Rolls is the apprenticeship of Job Ockford, son of pipemaker Samuel Ockford. On 1 October 1700 there is an entry of his apprenticeship to Philip Grubb, cooper, and his wife Katherine; and the entry is repeated on 7 October 1701, Job's surname appearing as Oxford.

2 Because the apprentice-roll entries for 1658-59 and 1661-67 are lost it is impossible to give the exact numbers of apprentices taken. The figures above include those whose apprenticeship record is missing but whose freedom is recorded, the burgess rolls noting the master involved. However, there must have been other apprentices who for one reason or another never completed their apprenticeship and are thus unknown.

3 Dinner being used in the sense of the principal meal of the day, which at this time was taken in the middle of the day.

4 As noted in the Preface to this published version, the existence of a "Guild Book" - more properly simply a jotter primarily of apprenticeship entries and a few other pieces of guild business over the period 1709-66 but with extensive secondary entries unrelated to the guild covering the period 1789-1823 (cf n. 11 below) - became known to this writer after the completion of the original thesis text; but for reasons outlined in the Preface the use of information from this book has been virtually confined to relevant parts of the first volume of this present version only.

5 This right appears to have been subsequently reinstated, however, for Latimer (1887: 51-2) referring to events of 1812, notes Mayors had this right "by ancient custom" and retained it until 1835 (cf an instance in the 1740s, Latimer 1893: 260).

6 For a description of the closely similar London apprenticeship and freedom rituals in the mid-C18 see R. Campbell 1/47: 304-5, 1969 ed.

7 Though Williams appears to have returned, for he is listed in the 1722 poll-book as a pipemaker living in St James parish.

8 Nott and Ralph actually say the officials were from the "pipemakers' company", but this cannot refer to the Bristol pipemakers' guild for it was not founded until the following year, and it is inconceivable that Fox would have been permitted to behave as he did and that the city would have paid so little heed to the Excise officials had the officials represented any city or guild authority. Latimer (1900: 72) notes that the Long Parliament imposed an excise duty on "tobacco pipes of all sorts, to be paid by the first buyer, for every grosse four pence" in July 1644 which may conceivably have been the tax referred to here if the onus was on the seller - who would also be the maker - to collect and pass on the tax to the authorities.

9 Latimer dealing with the C17 (1900: 496) says the ordinance against non-Bristolians was ordered to be abandoned in 1703, but dealing with the C18 (1893: 20-1, 116-7, 176) clearly indicates either this was not so or that the law had been reintroduced. Rogers (1949: 68-70) appears to follow Latimer 1900.

10 But see now Preface.

11 As noted in the Preface, the C18 Guild Book which became available to this writer after the completion of the original text of this thesis appears to have been latterly in the possession (apparently by 1789 and certainly in the 1810s and into the early 1820s) of a Mr Joseph Edwards, who used the book as a general ledger, scrap-book, and notebook and is certainly the Joseph Edwards jr, pipemaker, F 1774 and recorded working - initially with his father Joseph sr (F 1747, fl 1792, prob. D by 1794) - on Temple St between 1791 and 1823. As noted in the Preface, it is possible Joseph Edwards sr was one of the last officers of the guild and kept this particular book (and even others) after the dissolution of the guild (the Joseph Edwardses were third and fourth generations in a pipemaking family going back to Henry Edwards A 1689 F 1699 whom the Guild Book notes as Master of the guild in 1712). In any event, the last entry of guild business in the book is dated

1766; and the use of the book from 1789 variously as a ledger for coal sales (Joseph Edwards jr appears to have been in this business as well as in pipemaking) and other accounts, a scrap-book for a wide variety of items, a diary, and a notebook for information on Bristol history and for various remedies, chemical descriptions, and a "Receipt for Killing Ratts", as well as the lack of any further entries of guild business, does suggest the guild was no longer in existence by the end of the C18.

12 In the Staffordshire pottery industry, however, the very scattered evidence of formal apprenticeships in the C18 suggest that there was a small weekly wage, graded in some measure over the apprenticeship period, together with the provision of a few specified items of clothing, took the place of the master's earlier obligation to supply all that was necessary for the apprentice's upkeep (Weatherill 1971: 96-8).

13 Grants from this fund continued well into the C19 - Pountney records (1920: 329) a grant of £2 with an apprentice potter in 1830.

14 Alvey (1973: 35) notes the apprenticeship of the son of a Chesterfield ironmonger to a Nottingham pipemaker in 1724[/5?] for seven years "in consideration of 1d", but unfortunately it is the only Nottingham pipemaker apprenticeship entry quoted, so that no comparisons with other entries can be made to see if such a low sum was usual.

15 The figure of 347 pipemaker apprentices is for those noted from the apprentice rolls. The subsequent discovery of a Guild Book listing apprenticeships over the period 1709-66 (see Preface) has added to this number, but these additions have not been included here. A brief survey of the additions, however, appears to reinforce the conclusions drawn here regarding the occupations of pipemaker apprentices' fathers and also the conclusions noted on pp588-9 below regarding the counties of origin of pipemaker apprentices' fathers.

16 Bateman and Newton did not vote in 1747 either, though as noted above both did so in 1754.

17 Prior to 1918 general elections were spread over a period of weeks: Latimer 1900; 1893; and 1887 give dates and details for C17, C18, and C19 Bristol elections respectively; additional information comes from the Interim Report of the Committee on House of Commons Personnel and Politics 1264-1832 (July 1932) and Appendix IV of J.F.S. Ross's Elections and Electors (1955).

18 No poll-book for Bristol later than that for 1852 has been found by this writer, though Oswald (1960a: 73) cites Edward Hill, known to have been working 1850-76 (see Appendix IX), as appearing in an 1868 poll list - there were two elections in Bristol that year.

19 There are a number of errors and misprints in Oswald 1960a, and there are more pipemakers listed by Oswald as voting in Bristol in 1722 and not identifiable from other sources than the four listed above. These other problems have been resolved in correspondence, however (Oswald *in litt.* 6 January 1972). Of the four listed above, John Macey must be John Macey sr (A 1691, F 1700, fl 1726). William Haynes may have some connection with the Henry Haynes recorded as a pipemaker voting in Bristol in 1734 (see below), though who *he* is is a mystery. Israel

Carey (not listed in Oswald 1960a; supplied to writer subsequently) presents a problem. There are several generations of a family Carey making pipes in Bristol from the mid-C18 into the C19, and two were called Israel (one A 1748, F 1756, fl 1787, D by 1791; the other F 1812, fl 1812-29); but no Carey pipemakers are known in Bristol earlier than the Israel Carey F 1756 whose father, Richard, had been a Bristol weaver. There was an Isaac Cary (an alternative spelling of Carey also occuring in Bristol records) F 1672 in York (R. Hill 1955; Oswald 1960a; 64 as Carey). Alexander Cherrington is discussed below.

20 The Guildhall copy was printed for T. Cadell and E. Ward, the British Museum copy by E. Farley. The Bristol Museum copy of the 1734 poll-book, which was printed by Felix Farley from the original poll-book of one Mr Coster, has a page of errata added because of the

> many Errors, such as the mispelling of Persons Names, Places of Abode etc. in the transcribing, as well as printing. This being done in so great a Hurry, as not to admit of Time to get Information of Errors, or of comparing each Sheet with the Original as it was ready for the Press, the judicious reader is desir'd to accept of the following Errata gratis, and to correct the same with his Pen.

This comment could very likely apply to most of the poll-books.

21 Though some could conceivably have qualified as freemen through another trade - Richard Frank Ring who voted 1835 and 1852 as a pipemaker was F 1802 as a potter.

22 Saunders and Down appear at 19 Gt Ann St (at number 10 in 1849). Number 19 is Saunders's address: Down(s) votes from Sion Place, St Philip and Jacob Out-parish, a lane later known as The Paddock running from Stapleton Rd to Easton Rd ca.1/4 mile W of St Jude's and only recently closed to allow the site to be developed for industrial purposes (City Engineer and Surveyor's Dept, Bristol, in litt. 23 August 1972). Sion Place appears on Ashmead's 1828 plan.

23 It is not known for certain how out-voters cast their votes. The presumption is it was often done by agents, either the voters' agents or election agents. Otherwise, the voter took his burgess certificate to the sheriff and when he had voted his certificate was punched or franked with a small mark chosen by the sheriff, the mark differing for each election (I am extremely grateful to Bristol Public Libraries for supplying this information). It is possible Samuel sr had recorded his vote before polling began in order to have it sent to Bristol, in which case he could have died a short time before the beginning of April.

24 Curiously, but probably by coincidence, John Tovey appears to be following Carey premises but at about two decades' distance. It is possible he was a minor manufacturer moving into premises abandoned by other, more successful, makers. Thomas Appleford sr (F 1804) also appears in Castle Precincts, at Mary Bush Lane in 1812.

25 This may sound an unusually large number for this date, coming as it does with the final collapse of the Bristol industry; but the information came from the George family at the time their firm closed in 1921. The figure was given as being those employed "some 50 years

ago" (i.e. ca.1871) when the firm moved to its Gt George St premises from Gt Ann St; and the date at least is accurate, suggesting the 50 years was not given as a vague estimate, for the directory entries first record the firm on Gt George St in 1871. In fact, the business is recorded at both premises until 1873, which entries are confirmed by the property deeds for the Gt Ann St premises held by the Bristol Archives Office (ref 13480(26)) which note George sold the premises in 1873. (Previously, however, the expression "50 years ago" used in the account when referring to there having been 14 manufacturers in the area is underestimated, on the basis of directory entries, by ca.15 years.) An MS note dated January 1953 of the last Thomas George (who died in 1968, in his 96th year, unfortunately before the writer could interview him) says the family firm had 32 workers in 1900. In any case, whether the 30 or so employees represented the firm's staff in pre- or post-decline days it seems likely there must have been a hundred or two people employed directly or indirectly in pipemaking in the St Jude's area at the height of the industry in the mid-C19; and this agrees with the anonymous correspondent to the Examiner who noted (24 August 1850) "that probably from one to two hundred persons find partial employment in this trade" at that date. This, of course, agrees quite nicely with the total of ca.258 pipemakers given for Bristol as a whole in the 1851 census (above) - this latter total would have included those working for businesses, and presumably living, outside St Jude's; the 1851 trade directory noted 6 such businesses out of the 23 recorded for that year, one of which 6, Ring's, may have been that recorded in the census abstracts as having between 30 and 34 employees (above) and if not would probably have had about that number of pipemaker employees in any event. By contrast, when George's closed in December 1921 they had employed for the preceding two years just three pipemakers (Anonymous 1921a).

26 Figures given here and below for votes cast at the various elections are taken from Beaven's Bristol Lists:....(Beaven 1899: 169-72); they differ slightly from a number given by Latimer.

27 Sir William Henry Wills was the son of William Day Wills of W.D. and H.O. Wills. Like most of the Wills family he was involved in social work and liberal politics; prior to standing for Bristol East he had been Liberal member for Coventry 1880-86 (Alford 1973: 279-80).

28 For an example of this, see attempts in Appendix IX to unravel the Robertses pipemakers.

29 With the exception of Lewin's Mead Meeting, the Unitarian chapel opened in 1791 (Latimer 1893: 483), what survives at present of Lewin's Mead dates largely from the second half of the C19 - in 1906 it was noted (Anonymous 1906 ed: 387) that "within the last forty years" the old houses had disappeared and the street was "now double its original width".

30 An interesting sidelight on the cottage industry-master craftsman-family business-factory progression occurs in W.H. Warburton's The History of Trade Union Organization in the North Staffordshire Potteries published in 1931 where he suggests that the "industrial revolution" - regarded here as the replacement of manual skills by

machinery (machinery in the sense of apparatus to produce ceramics without the traditional contact between fingers and clay and at such a rapid rate that hardly any workers could produce similar or greater quantities) - began in The Potteries only in the 1870s, the preceding 20 years having seen the introduction of machine-production processes (cited in Celoria 1973: 11). Celoria (op. cit. 11-13) suggests this to be by and large true as a generalization, and that in this regard The Potteries were behind other ceramic-producing areas of Britain such as Scotland at this time, though there were exceptions. In this sense pipemaking can hardly be said to have ever reached the "industrial revolution", for as noted earlier (pp 152-4 above), though there were a number of processes patented from 1848 onwards for mass production of pipes there is little evidence that any of them proved practical (despite Jewitt's claim (1878: I, 298) that Edwin Southorn of Broseley had introduced steam-power in 1868 to produce 1,500,000 pipes a year), and the industry right to its effective end in the later C19 and early C20 - and even largely today, though recently-perfected machinery is being used to produce cheap varieties of pipes in The Netherlands, Belgium, and the Westerwald in Germany (see 2: 11-1V above) - remained one where manual dexterity continued paramount in the trade.

31 When Philip Guy was apprenticed 20 April 1812 to William Okely the scribe started writing "Oak-", then put a line through it and continued with the spelling Okeley. Perhaps William was watching his name being written and corrected it! As noted in Section VII(a)(2) below, a pipestem-fragment at Stroud Museum which should date to the early C19 and thus belong to either Martha or William Okely has enough of the maker's name left to show the spelling of the name there must have been Oakly; C18 references consistently prefer Okely and in the C19 poll-books the name is recorded twice as Okely and once as Okeley, but trade directory entries frequently use the spellings Okeley or Oakley in the C19. In the C18 Pipemakers' Guild Book described in the Preface and latterly used by pipemaker Joseph Edwards jr (F 1774, fl 1823) as a general ledger, scrap-book, and notebook there is a reference dated 1805 to an account with a Mr Matthew Okeley, who may or may not have been related to the pipemaking family, reinforcing the impression that the spelling Okeley was the most common by the C19.

32 According to Pountney (1920: 268), who appears to have been unaware of the family's Canadian ties, the Whites had been pipemakers for "many generations" at Rich's Buildings, Redcross St; but none are recorded there in the directories before 1829. A Joseph White appears as a pipemaker on New St, St Jude's, 1813-17 (see below); but the only earlier White pipemaker in Bristol sources is John son of a Somerset cordwainer, A 1733 and F 1734 in which year he voted in St James parish.

33 "Egyptian black" refers to a dry-bodied stoneware most commonly known as black basaltes after the name applied to it by its most prominent maker in the C18, Josiah Wedgwood. Its continued popularity was in part due to it becoming fashionable to use in times of mourning, because of its colour. "Blackware" can refer to either Egyptian black or to earthenwares covered with a glossy black glaze (cf Pountney 1920:

268). "Rockingham" refers to a manganese-brown glaze very popular on Victorian teapots and other wares; it originated at the beginning of the C19. "Staffordshire warehouse" presumably indicates the firm had a wholesale and retail business in the mass-produced refined hard-paste earthenwares made in Staffordshire last century and exported in vast quantity - the "china" of the Victorian period.

34 Saunders himself, however, may have died sometime after 1841, the business continuing to include his name (see Appendix IX).

35 The reference to the Pierce company's works being in Kirk St is curious, for the trade directories do not list the firm there at any time (during the period 1884-85 referred to above, their works is recorded at Knowsley St, Cheetham). From 1897 the firm of Pollock (first recorded in the directories in 1886 but according to Gordon Pollock, the present owner of the firm and the third generation of the family in the business (*in litt.* 11 January 1966), founded in 1879) appears in the directories at Kirk St, Every St, Ancoats; and this firm, still in business today (see 2: VII), still calls its factory the Kirk Factory, though in 1957 Kirk St was renamed Harding St (Manchester Public Libraries *in litt.* 26 July 1974) - at which time the factory name was changed from the Kirk St Factory to the Kirk Factory - and in 1974 the firm moved to nearby Stott St; but Mr Pollock and his mother are both quite certain there was never any connection between the Pollock firm and the Pierce business (G. Pollock *in litt.* 9 August 1974): indeed, Mr Pollock's grandfather Edward Pollock had the Kirk St Factory built as a new structure. Mr Pollock notes that a map of Manchester bought by him in 1931 shows two Kirk Sts and there is thus a possibility the Pierce firm had a factory on the other Kirk St; on the other hand, if Pierce's had a factory on Pollock's Kirk St in 1884-85, then Edward Pollock, building on Kirk St a dozen years later, could have done so elsewhere on the same street or could have bought the Pierce factory, razed it, and built his own new factory on the site.

36 Agitation against shop-signs in the City of London started after four people had been killed in 1718 when a shop front collapsed under the weight of its sign. The suggestion of numbering was taken up, but it remained virtually unused until the City in 1762 and Westminster in 1763 banned shop-signs hung over the street (Heal 1947: 2-4; Mitchell and Leys 1958: 216-7, 1963 ed). In 1766 Bristol obtained an Act of Parliament requiring signs to be moved and placed flat on building walls (Marcy 1969: 151); Sketchley was thus being quite up-to-date. Simeon Shaw, writing of The Potteries in 1829, noted that

> Many of the new streets are distinguished by the Name on the corners; but few of them have the Doors of the Houses numbered. This might be done on a very useful, simple, and convenient plan - all the *even* Numbers might be on one side, and all the *odd* ones on the other; a person would then be certain on whether side was situated the house he was seeking (S. Shaw 1829: 13, 1970 ed).

Like Sketchley, Shaw appears to have been before his time.

37 Matthews's directories give the number only from 1882, but Scammell's

Gloucester, Bristol and South Wales Directory of 1853 and Hunt's Bristol and Welch Towns Directory of 1848 both list John Williams (see below) at number 14.

38 But no Bristol maker appears to have had the flair for advertising demonstrated by Ebenezer Church, who worked at North St, Pentonville, London, from 1865 to 1886 (see 4: VI above). In one advertisement Church described himself as a "Designer in Tobacco Pipes" and noted that "A Specimen Sheet of Patterns may be seen on the Platforms (either side) of all Metropolitan Railway Stations, from Portland Road to Aldgate". Among his creations were "the celebrated University Pipes, the British, Foreign and Colonial Rats, the unique Palestine Clays, the Lowing Ox, the Danube Bramble, the Turko-Russo, Duchess of Middlesex, &c": as noted on p. 157 above, Church had successfully charged another pipemaker in 1877 (the year before this advertisement was printed) with copying his "Danube Bramble" registered in 1876, and this too made good copy for the same advertisement, it being noted that "The excellence of our goods has induced some unscrupulous tradesmen to imitate our patterns - vide 'The Times,' October 5th, 1877, for the report of a case where a person was fined £5 and £2 4s costs for fraudulently imitating one of our registered designs". There then follows some words of warning about using tobaccos with additives; and finally, as a piece de resistance, an account in the Daily News of 12 September 1877 of an inquest into a child who had died of nicotine poisoning from a foul wooden pipe which he had been using to blow bubbles after breaking a clay pipe is reprinted as part of a scientific-sounding homily as to the dangers of smoking a wooden pipe. Church's 1879 price-list also has some smooth lines. Among his classes of pipes were "Fancy Clays", which were actually of average price, and "Superior Clay Bowls (moveable stems)", which included the majority of his most expensive types; but pride of place was given to what he called his "Spécialité Clays", thus adding that soupçon of je ne sais quoi which foreign phrases always seem to impart and perhaps implying an aura of Gambier and Fiolet quality from France (see 3: V above). Remittances were to be made to Church at his "Head Office, London", a title tending to obscure the fact there was only one office; while the business, elsewhere called the Pentonville Tobacco Pipe Works or Pentonville Pipe Works, appears somewhat self-consciously as "Ye Pentonville Workes", an orthography perhaps designed to laud the clay pipe as olde English at a time when it was dying in the face of the recently-introduced foreign brier pipe and cigarette. Church, one feels, was a born businessman.

39 The poor-rate entries indicate that J. [sic] Carey in fact occupied 15 Castle Green from March 1782; Carey had probably continued at 38 Lewin's Mead until that time, for he is listed voting in St James parish, where Lewin's Mead lies, in 1781 (see Israel Carey II entry in Appendix IX). A heap of clay pipe wasters found in 1971 at the corner of Broad Weir and Lower Castle St, adjacent to Castle Green (see FIG 214), has been associated with Israel Carey by R.G. Jackson and dated by him to ca.1782-92 (R.G. Jackson 1972), though as indicated above Israel Carey was apparently dead by 1791, when his son John is listed

at Castle Green. Identical pipes have recently (1973) been found in a kiln tip at Whitefriars, a lane off Lewin's Mead (R. Price *in litt.* 18 January 1974), which must represent Israel Carey's business in Lewin's Mead prior to his move to Castle Green.

40 Until 1769 the Temple St fair began 25 January and the St James's Churchyard fair 25 July; subsequently they began 1 March and 1 September respectively.

41 As noted on p.159 above, an unusual instance of how pipes might get carried over a considerable distance is recorded by George Ewart Evans. Discussing the annual migration of East Anglian farm labourers to work in the maltings at Burton upon Trent in the later C19 and earlier C20, Evans notes (1970: 264) one of his informants recalling that the pubs at Burton gave out free clay pipes with their names on them and that the first season he was there (in 1901) he brought back to Suffolk 90 of these pipes.

42 Atkinson (1968a: 11) notes a shipment of pipes and pipeclay in 1666 from Cowes on the Isle of Wight to "Brightston" which he identifies, no doubt correctly, as Brighthelmston (modern Brighton). Salzman (1968) suggests it can be identified with Bristol, but despite the rather surprising references above to pipes being shipped to Bristol from Caerleon and Barnstaple, Atkinson is surely right (1969a: 104-5) in finding it difficult to believe that pipes from as far away as Cowes would have been shipped to Bristol. The pipeclay, of course, might have been worth shipping that far, though the North Devon and Poole clays were nearer and probably better; it is possible in any case, even though the ship was a "Brightston" vessel and cleared for "Brightston", that the pipes were destined for some port en route to "Brightston".

43 J.K. Knight (1970: 410-1) suggests this material - from the St Nicholas's Almshouses excavations - is Bristol made, and draws a parallel with an atypical sherd from Jamestown in a pre-1640 context, but if so, this spread of manufacture only emphasizes the fact that the North Devon sgraffito-ware industry was already active by this time. Knight also (Radcliffe and Knight 1974: 94) notes North Devon sgrafitto-ware was being copied in South Wales, material from Abergavenny almost certainly coming from Gwehelog near Usk.

44 The coastal shipping trade is reflected in a number of pipe finds. A pipe made by Robert Pottle of Fareham, Hampshire, fl 1711, has been found at Newhaven in Sussex (Atkinson 1966: 274, fig 7), ca.55 miles east; products of John Edmonds, a mid-C18 maker probably working in Portsmouth (see p. 615 below) occur as far east as Arundel (Atkinson 1966: 273, 274 fig 3), ca.22 miles away, and as far west as Plymouth (Oswald 1970a: 132, 133 fig 55,32), ca.140 miles away; pipes marked Hoar of Devonport - there were three makers of this name in Plymouth in the 1820s-1850s (Oswald 1970a: 140) - have been noted at Truro in Cornwall (County Museum and Art Gallery), ca.40 miles west, from Launceston Castle, St Austell, also in Cornwall (Oswald 1970a: 132), ca.30 miles west, and probably from Totnes (stem fragment in A.S. Brook Collection there similar to the other examples, DEVONPORT on the only side visible in the case), and from Southampton (in museum collections), ca.125 miles east. A decorated bowl of unknown maker and

origin, but with a distinctive if vaguely-moulded motif of a bottle- or carafe-like object surrounded by a wreath on the right side, has been noted at Totnes (A.S. Brook Collection) and Brixham (Brixham Museum) in Devon and at Southampton (museum collections). Much farther-flung coastal trade is evidenced by Liverpool and Sunderland pipes - together with French and Dutch - from Newhaven (Atkinson 1966: 274).

45 The place given is presumably that where the father was working at the time of the son's apprenticeship, which in the majority of cases would probably have been the father's place of birth or at least the place where he had spent most of his adult life; where the father was dead, the place given was probably the place where the father had worked. That this was not invariably the place of the son's birth is indicated by the case of George Viner A 1740 F 1747, who was born at Painswick in south Gloucestershire in 1723/4 even though both his father and paternal grandfather are recorded as joiners "of Bristol" (the Viner family, however, were native to the Stroud-Pitchcombe-Painswick area of south Gloucestershire) (G. Viner *in litt.* 8 and 28 August).

46 A study of immigrant insured labour in Bristol for the period 1900-28 showed that 34.5% came from Gloucestershire, Somerset, and Wiltshire; 23.7% from Glamorgan and Monmouthshire; and 8.4% from the South-West excluding the three counties noted in the first figure (Shannon and Grebnik 1943: 31-2). Thus two-thirds of the immigrant insured labour for this period was still coming from what can be considered the traditional Bristol hinterland.

47 Though this name is also listed among those traditionally introduced by the German and Dutch families brought over at the beginning of the C18 as skilled labour for the Bristol Brass Wire Company first at Baptist Mills in 1702 and then at Keynsham in 1706 (Hamilton 1926: 109 n.2, 1967 ed; repeated in Buchanan and Cossons 1969: 117).

48 Recent and as-yet unpublished finds of Ham Green ware from Salisbury and Southampton somewhat modify the picture given of Ham Green ware hardly penetrating as far east as Wiltshire; Salisbury is on the obvious Bristol-Southampton trade route. Finds of Ham Green ware from Cork, however, also unpublished, further emphasize the Bristol-Ireland connections of the period (*ex info.* K.J. Barton during visit to Ottawa September 1972).

49 In terms of the new counties and county boundaries for England and Wales which came into effect on 1 April 1974, the area covered was as follows:

Cornwall
Devon
Dorset
Somerset
Wiltshire
Avon
Gloucestershire
Warwickshire
part of West Midlands
Hereford and Worcester
southern Powys
Gwent
South Glamorgan
Mid Glamorgan
West Glamorgan
southern Dyfed

50 Minimal views appear to be fashionable among archaeologists at present, at least among prehistorians. Independently of this writer's use of the term there have appeared recently "The Wessex Culture: A Minimal

View" (Coles and Taylor 1971) and "The Larnian Culture: A Minimal View" (G.F. Mitchell 1971).

51 The material in the Somerset County Museum at Taunton labelled as coming from "Downside" probably comes from immediately north of Shepton Mallet, where Downside Abbey, a monastery and public school, is situated (P.A. Langmaid, Assistant Keeper, Somerset County Museum, in litt.). According to D.R. Atkinson (in litt.), the Downside material at Taunton probably all comes from the Abbey site about the time of its redevelopment ca.1896, being collected by a monk there with antiquarian interests.

52 However, the example illustrated in Atkinson is, from the bowl form, definitely later than the mid-century bowls attributable to John Hunt I and could be an early product of one of the two Bristol John Hunts (noted in the next paragraph both sons of Flower Hunt and free 1689 and 1694.

53 The name Hunt in these marks frequently appears with the N and T dipthonged so that the bar on the second vertical of the N could have been overlooked by Hughes; the initial H could also have been misread as a B.

54 The Howells, like the Hunts, are a pipemaking family in the middle and second half of the C17 and into the C18, products of various members of which are widespread in the West Country and beyond - John's pipes are in collections in London, Leicester, and Belfast - but whose identification and place(s) of work remain unknown. In addition to John and Nathaniel, a George and a Richard are known from pipes; a Giles Howell was apprenticed at Road in north Somerset in 1723 (Oswald 1960a: 74). Stems from Bath with NATH/HOW/ELL on them in typical Wiltshire-Hampshire fashion (cf Jeffry Hunt stem noted above from nr Salisbury, see also p. 614 below) (Brown and Snedden 1973: 295) suggest either that Nathaniel Howell was active for some 50 years or else that there was a second, later, maker of that name. A journeyman of this name appears among the signatories of the ca.1696 oath of allegiance to William of Orange presented by the London pipemakers' guild (R.H. Cooper in litt. 19 December 1972). T.G.H. Price (1901: 345), presumably quoting Pritchard's correspondence with him, says Nathaniel took his freedom in Bristol in 1651, but this is not so; Pritchard in 1923 does not actually say either John or Nathaniel were Bristolians, and neither appears in the Bristol freedom rolls.

55 There is also in Gloucester museum a Philip Edwards pipe from "Jacob St, Old Market, Bristol".

56 See footnote on Downside above.

57 Another Richard Nunney pipe at Taunton is labelled as coming from Bristol.

58 Continuing excavation at the Buck site, Maryland, has produced a pipe with a bowl approximately comparable to the James Fox and William Evanses types in figs a and c-d respectively and the mark A·A on the stem top with an X· certainly on the right side of the two As. This corresponds to no known Bristol mark, though the bowl could typologically possibly be a very early product of Anthony Andrews of London, fl 1693-1716, or Arthur Andrews also of London if he were

working appreciably earlier than his sole recorded date of 1716, the only two English makers with these initials recorded by Oswald whose dates might at all agree both with the bowl shape or with the date of the other pipe material from the site (Oswald 1960a: 55). However, the Buck site has produced an appreciable amount of LE- and WE-marked material much more in keeping both with a Bristol origin and a dating somewhere between 1660 and 1680 (Alexander *in litt.* 17 December 1972 and 14 January 1973).

59 In fact, the Pipemakers' Guild Book has a heading "Mr Isasc Evans Master" between an apprenticeship entry dated February 1709/10 and one dated January 1710/1 - apparently associated with the latter entry rather than the former - which on the evidence of the apprenticeship entries and from similar references elsewhere in the book to a "Master" must indicate Isaac Evans was Master of the Guild at this time (he is certainly not the master of either of the apprentices in the entries, for example). Evans died a year or two later, however, for his will was proved in April 1713 (R. Jackson 1973: 206).

60 Though it is not unique to Bristol, being used for example among Nottingham makers from the mid-C17 certainly into the C18 and possibly into the C19 (Alvey 1972: 30 fig 10 *passim*; 1973: 36 fig 1 *passim* and 39 fig 2,14; 1974: 70 fig 11 *passim*).

61 A typical earlier-C18 West Country type 9 bowl from Port Royal, Jamaica (Oswald 1968: 81 no 194), has a cartouche on its right side reading I/MIH/VRS. No Bristol-West Country maker is known with a name resembling this, and Oswald is possibly correct in identifying the maker as John Myers of Chester F 1722 (cf p.332 above). G.C. Spence (1942: 50) notes a pipe at Chester with ED/WARD/EVANS - the S retrograde - in a circle on the bowl and dates it to ca.1646, but Oswald (1959c: 205 fig 4(21)) illustrates a Chester Edward Evans bowl, certainly of about the same date, with the same mark but represented as a heel mark (Spence unfortunately does not illustrate his example).

62 After writing this exhausting analysis of the problem of alleged Dutch origins for the Oswald type 9 pipe it is somewhat of an anti-climax to read Atkinson saying quite categorically (1972d: 177 n.2) that

> The suggestion that has been made in the past that at the end of the seventeenth century English pipes began to copy Dutch styles due to the influence one way or the other of William III is pure fallacy. No greater difference in styles can be imagined in commonplace objects which served the same purpose than Dutch and English clay pipes of the eighteenth century.

63 The label with this Edgehill pipe says the decoration is Broseley in style; a *grooved* spiralling on the stem of long Broseleys at the point where the fingers would normally hold the stem is known.

64 But see now *Arch. Rev.* 6 (1971) 47 s.v. Bristol - Temple Back.

65 As discussed in Appendix IX, a bowl of typical Bristol earlier-C18 form with a cartouche reading E PEARCE seems to be attributable only to Edward Pearce F 1766 fl 1781 or to Eli Pearce fl 1775 (there is, as discussed there, a possibility that Edward and Eli Pearce are in fact the same person). Unless he (or they) were in business decades before

their earliest at present known dates it is difficult to explain their using a mould producing bowls so much earlier; however, as noted in 6: IV, the law requiring freedom to be taken before setting up in a trade was dying in the C18 and there are cases of pipemakers (whether previously in business, however, is not known) not taking their freedom for 20 or more years after commencing an apprenticeship. Eli Pearce became free 1766 on the grounds he had married the daughter of a pipemaker, either John Bonner 1 (F 1712) or John Bonner 11 (F 1754, fl 1784), so that conceivably he could have worked for a considerable time prior to 1766 and even as early as the first third of the C18.

66 There is a possibility, too, that Kingston upon Hull pipes may have reached Virginia in the C18. Sheppard (1902: 17-18, 1912 ed) notes Hull trade in tobacco with Virginia at this time, which also saw the height of the Hull pipe industry.

67 The Kilkenny and South-East Ireland Archaeological Society evolved into the Royal Society of Antiquaries of Ireland; their museum material is placed on loan with the Royal Irish Academy collection in the National Museum of Ireland in Dublin (Royal Society of Antiquaries of Ireland *in litt.* 1 December 1971).

68 The descriptions in Cotter 1958 of pipes from Jamestown, founded 1607, are only rarely detailed enough for definite identification, while pipes from the excavations at Plimoth Plantation, Plymouth, in Massachusetts, founded in 1620, have not so far been published in any form. Until the pipes from these two sites have been presented in detail we are denied information from the two earliest permanent English settlements in North America, and thus an adequate knowledge of the earliest sources of these pipes, which may quite possibly have included Bristol. It is much to be hoped that Jamestown pipes will be adequately published, for until they are many of the attributions of Bristol pipes from that site made in the following pages cannot be regarded as absolutely certain.

69 For a discussion of these uncertainly-ascribed pipes - apparently marked IE - see Appendix IX under entry for Isaac Evans.

70 The mark attributable to Thomas Monkes is a T surmounting and joining an M and generally, but apparently (T.G.H. Price 1901: 348 fig 15) not always, with a simple scroll motif above the T, as at Green Spring Plantation. A very similar mark but reading IM occurs on a pipe from an Onondaga Indian site referred to in 1677 and nr Watervale, SE of Syracuse, New York state (Beauchamp 1898: 115-6, fig 139 and Parker 1920: 642; Omwake 1957b: 12), but while the bowl shape might have been made by Monkes the illustration shows a stub-stemmed pipe with the stub-end collar ornately decorated, which seems hardly conceivable for a product of Monkes or of anyone else of this period, though there is an inevitable tendency to think of a Dutch origin for any unusually elaborate pipe forms this early. Neither the illustration nor the verbal description suggests this stub stem and collar to be a subsequent modification to fit a makeshift stem to the bowl, something which was sometimes done, although usually by paring down the broken stem-end to fit a wooden, reed, or other stem. However, a typical Bristol type 9 export-style product of Isaac Evans at Gloucester

Museum, the bowl heavily marked with the saw-blade decoration normally associated with rim decoration, has a rather similar "collar" on the stem near the bowl. The rest of the stem is broken off here, but appears to have been a normal one.

The same IM mark occurs on a pipe from Portland Point, New Brunswick (Omwake 1957b: 11-13 and photograph supplied by the New Brunswick Museum; also Barka 1965: 430, pl 155 top right) which seems to have had an orthodox stem but has a bowl shape suggesting the pipe may be Dutch. No mark of this design is illustrated by Helbers and Goedewaagen (1942) under either IM or TM, but as IM the mark occurs on one of Düco's C17 Dutch pipes which is identified by him as made in Amsterdam, probably by Jan Muur, between 1640 and 1660 (Düco 1974: 1st page and fig 9), and the mark is listed among those occurring on Dutch pipes found in England, in this case on a pipe dated by Friederich's system to ca.1630 (Atkinson 1972d: 182 fig 81,10).

71 The 1696 assessment actually lists a John Tippet, widower, with the Robert Tippet household, and neither apprentice is in fact called such, one, John Quinton or Quinten, being listed as a servant; but John Tippet is almost certainly a mistake for J(o)ane and both Quinton and the other member of the Tippet household mentioned, Henry Hoar, took their freedom as pipemakers in 1699. Quinton is noted in the freedom rolls as having been apprenticed to J(o)anne Tippet - his apprenticeship date has not been found - while Hoar, whose surname appears in some extraordinary variants, is probably the Henry Rear apprenticed to Robert and Sarah Tippet - he is noted, when becoming free, as having been an apprentice of Robert Tippet II.

72 An example of the need to illustrate or describe clearly the mark on a pipe is the instance of a mark which occurs on both sides of the bowl in the form of the letters RT inside a heart-shaped beaded-line outline with a decorative motif below the letters and a star above the heart and on either side of its foot. This occurs on at least two pipes from Fort Michilimackinac (Omwake 1962: 11-12, illus. fig H; Petersen 1963a: 5 lower rt; 1963b: figs 12 and 14, p.6). From the absence of this mark in the Bristol collections it seems certain this is not a Robert Tippet product, nor that of any other Bristol maker, despite the positioning of the mark - on the bowl sides - being very typically Bristolian [but see now Jackson and Price monograph noted in Preface, their p.117]. Lenik (1974a: 16) refers to a pipe "marked 'RT' on the bowl" from the Charlotteburg Middle Forge at West Milford in northern New Jersey but gives no further description: in fact, the pipe is exactly the same as the Fort Michilimackinac examples (Lenik *in litt.* 13 December 1974) and thus not a Robert Tippet product [see now above]. The Charlotteburg Middle Forge, incidentally, was in operation 1765-ca.1780, which gives a useful indication of date for the pipe (Fort Michilimackinac was occupied ca.1715-1781).

73 Taking the "front" of a pipe to be that part facing the smoker, though the writer realizes he appears to be contra mundum here, most people apparently feeling the side away from the smoker is the front.

74 According to Marochan (Marochan and Reed n.d.; Marochan *in litt*. Omwake-Marochan correspondence, copies in writer's files -

the pipes have not been seen by the writer) pipes marked 1/T1P/PET in a cartouche on the side and others similarly marked 1T or with 1T impressed facing the smoker were found at the Robert Tippet family Whitson St kiln-site in Bristol. Robert Tippet pipes associated with the site date typologically to ca.1680-1760, suggesting the site was used over a considerable period. Marochan suggests J(o)ane Tippet produced the 1/T1P/PET and 1T pipes, but while one of the latter, with the letters in a cartouche, is typologically datable to ca.1690 (though earlier in form than the J(o)ane Tippet pipes identified above in North America), one with 1T impressed facing the smoker and the 1/T1P/PET example illustrated are typologically much later - mid-C18. Two John Tippet(t)s are recorded apprenticed as pipemakers, John 1 A 1691 and John 11 A 1723: nothing more is known of the former, but John 11 became free 1734 and was still alive 1754 though dead by 1766. Robert Tippet 11 does appear to have had two sons John, one baptised 22 March 1696/7 the other baptised 24 August 1702, but neither of the above John Tippets were direct relatives of the Robert Tippets, John 1 being the son of a Bristol mariner Joseph Tippet and John 11 being the son of a Barton Regis (then a Gloucestershire, now eastern suburban Bristol) coal-driver Richard Tippet, and neither were apprenticed to either the Robert or William Tippet pipemaking families (William I and Robert II were brothers) which one might have expected had either been a relative. With the exception of the Clay Bank pipe (above) which appears to have had the R of 1R/T1P/PET deliberately removed after moulding, this writer has seen no 1/T1P/PET pipes either in the Bristol collections or from New World sites.

75 For a discussion of the problems of identifying some of the possible Isaac Evans products see Appendix IX under this maker's entry.

76 For finds from other sites of pipes some of which may also be products of Edward Reed see discussion below under the Edward Randalls.

77 A fleur-de-lis-marked bowl is recorded along with three probable Robert Berryman of Bristol bowls and one definite Philip Edwards of Bristol bowl from a site at East Boothbay, Maine (Nickel 1966: 14). The fleur-de-lis as a Dutch maker's mark is first registered at Gouda in 1667 (Helbers and Goedewaagen 1942: 226, 229 no 250), and various C17 pipes with it as a heel-mark are illustrated by Düco (1974: figs 9, 13B, 39), though as noted earlier (p.347 above) the use of the fleur-de-lis as a stem-mark goes back to ca.1630.

78 South (1971: 42) gives several references to EB pipes from New York and Pennsylvania citing (his footnotes 19-20) information available to him from Barber 1880a and 1882b, but in fact South's source (see square-bracketed note after South's footnote 22) appears to have confused both page numbers and what Barber actually said; Barber does note EB pipes from Long Island, New York, and Lancaster County, Pennsylvania, in 1882b: 201.

79 The port books examined by Jackson and Price covered the period 1773-1818, excluding the years 1781-89. The port books prior to 1773 are not held in Bristol, nor are those for 1781-89. As noted above, no pipes were shipped to the American colonies between 1775 and 1779: 78 boxes are recorded shipped in 1780, but with the books for 1781-89 not

studied, figures for the remaining years of the Revolutionary War, which ended with the Treaty of Versailles in 1783, are not available; the existing evidence, however, is sufficient to show how disruptive the American Revolution was to the Bristol industry.

80 MacInnes (1939: 279) refers to this, but misinterprets it to imply annual Bristol exports of pipes at this time totalled ca.600 boxes - "Bristol pipe-manufacturers annually exported 600 boxes of pipes to the colonies..." - but Latimer clearly says the 500-600 boxes annually was a figure for individual makers. Unfortunately Latimer does not state his source, nor does he say how many pipemakers actually were shipping out amounts of that size.

81 Forma (1972: 43, 49, fig 31,1 and pl 2,6) tentatively identifies a Ring pipe among the material attributable to the Hudson's Bay Company occupation at the Michipicoten Trading Post site (see above); but the form of lettering, the style of decoration, and the way the inscription on one side would have to read - hypothetically BR[ISTOL RING] - all differ from the appearance of any known Ring pipes. The general style of the fragment in fact strongly suggests something very similar to the A. Sparnaaij (variously spelt) Gouda-made stems from the same site (Forma 1972: 43, 50, fig 30,3 and pl 2,8) which are known from another northern Ontario site, the Longlac Trading Post (Dawson 1969: 46, 27 pl 7,7), as well as from an excavation in Brooklyn, New York (Salwen 1974: 31 fig 4,e, 35, but with wrong dating) and - with the initial E - from an unknown site the material from which is now in the Wyoming State Archives and Historical Department at Cheyenne (in litt. 13 June 1968). Numerous makers called Sparnaaij or a variant spelling - e.g. Spernay - are listed last century in Gouda (Laansma 1960: passim). The Sparnaaij fragments in turn appear to be one of a number of Gouda and other imitations of Peter Dorni pipes made in north France with this decoration (see p.296 above).

82 Thomas John Corcoran, last recorded as a pipemaker in Bristol in 1904, emigrated to North America, but where to and whether he continued as a pipemaker is unknown.

83 A possible Herefordshire or Herefordshire-style pipe has recently been recorded from the Hallowes site in Westmoreland County, Virginia, together with products of several Bristol pipemakers (Buchanan and Heite 1972: 44 fig 4,H; see 6: VII(b)(4) for the Bristol material). The find was of a bowl-fragment with the mark of a rose facing the smoker; such a mark could also be Dutch, but it is impossible to be certain of identification from the drawing. Other artefact material from the site suggests a second-half-of-the-C17 context, which would agree with the dating noted above for the growth of the Herefordshire pipe industry (see now I. Walker 1974b).

84 In their study of C19 Bath pipemakers, Brown and Brown (1974: 27) note that the earliest member there of the Sants family (eventually to be the last Bath pipemaking family, closing in 1919), a Joseph Sants first recorded in 1837 and working until 1871, was a native of Gloucester who was aged 40 in 1851 and thus born in 1810 or 1811. As no study has yet been made of the Gloucester pipemaking industry (cf I. Walker 1974: 143) no information on the Sants family there is available, but it is

possible that the first line of the above stem-mark is in fact some variant spelling of Sants. If so, it would give the family a long tradition in the pipemaking business, for the stem is certainly C18 and possibly first half of the C18 and the family was presumably making pipes at Broseley before settling in Gloucester.

85 A James Mathews, pipemaker, is known in Bristol. He became free 1723 and voted in Bristol in 1734 and 1739. He was, however, apparently a native Bristolian, for when he was apprenticed in 1713/4 it was noted he was the son of George "Matthew", a victualler of Bristol. Two of his daughters married John Andrews and Samuel Pearce sr who became Bristol pipemaker burgesses by their marriages.

86 In fact Ebbery's apprenticeship is recorded in the Bristol Pipemakers' Guild Book - he was apprenticed on 24 September 1712 - and his father was indeed a Bristolian, George Ebbery, a clothier.

87 Dates for the Smitheman business are at present vague, but "Messrs. A. Smitheman & Co., of the Crown Pipe Works" are noted in 1908 (Randall 1908: 442), and the present derelict Southorn factory at Broseley was said by the present Mr Southorn to have been taken over from Smitheman's in the 1920s. A pipe at Tenby in an immitation brier form (and therefore datable to the second half of last century or later) is marked R. Smitheman in a Southorn-like stamp and a fragment at Stroud has a similar mark T. Smitheman, suggesting several generations, or several members, of the family were in business.

88 In a recopying of this information Mr George added

The List of ships going to the West Coast
of Africa were

[illegible word - Messrs?] Richard & William King,	21
[ditto] Lucas	19
[ditto] Rider Son & Andrews	8
	48

Presumably these were traders or ship-owners; they have not yet been identified. What Mr George's source of information was is unknown - a ledger-book or diary seems more likely than oral tradition for the names and figures.

89 When the bridge, a single arch of stone (Matthews 1794: 37), was rebuilt in 1798 it was announced it would be called henceforth Frome Bridge. By the mid-C19 the name Traitor's Bridge was still remembered but was now identified with the similar-sounding Quaker's Bridge (Latimer 1893: 526), a footbridge across the Frome at the former Friends' Workhouse which appears to be the one indicated by Millerd ca.1710 (FIG 173) and is still named Quakers' Bridge on the 1883 OS plan (FIG 174). By 1903 (FIG 175) it had disappeared with the covering over this part of the Frome. FIGS 183 and 184, two O'Neill pen and ink and watercolour drawings both dated 1821, show these two bridges, though unfortunately their Braikenridge catalogue entries confuse their identification. FIG 183 (Braikenridge catalogue M 2908) is described as "Traitors Bridge at the end of the Rope Walk rebuilt with improvements 1798", which would seem to identify it beyond reasonable doubt as Traitor's, later Frome, Bridge. FIG 184 (Braikenridge catalogue M 2909), however, is entitled "Frome Bridge the first Bridge

above Traitors Bridge at Earls Mead". In the first place, Frome and Traitor's Bridges, as already indicated, are the same; and secondly, there were at this time no bridges over the Frome above Traitor's or Frome Bridge until Baptist Mills: the entry could have been meant to read "Frome Bridge the first bridge above Quaker's Bridge at Earls Mead", but this would then mean both pictures were of the same bridge (i.e. Traitor's or Frome Bridge) which they manifestly are not. Assuming FIG 183 is indeed Traitor's or Frome Bridge, the best identification of FIG 184 would be that it is Quaker's Bridge and that the entry should read "Quaker's Bridge the first bridge below Traitors Bridge at Earls Mead", which would be geographically accurate. Further, the bridge in FIG 184 looks as though it might be a footbridge, which Quaker's Bridge certainly was. However, as discussed later (pp722-3), a careful comparison of the two pictures with Ashmead's detailed plan of only seven years later (FIG 168) suggests that in fact FIG 184 is Frome or Traitor's Bridge (i.e. the bridge linking Wade and Houlton Sts) and that FIG 183 is Quaker's Bridge. The catalogue entries may of course have been written long after 1821 and bear no relation to any original caption the pictures may have had: the entry for FIG 184 would still be correct if Quaker's Bridge had already become known as Traitor's Bridge by 1821 or at any rate by the time the picture was identified for its catalogue entry.

90 I am very grateful to Bristol Post Office who went to consideable trouble contacting the City Engineer's Department (responsible for naming thoroughfares), examining voter's lists, and even consulting older past residents of the area, to check whether this cul-de-sac had ever had a name. No evidence for any came to light; it appears always to have been considered part of Eugene St, and the property illustrated in FIG 186 is known, as indicated in FIG 178, as 1a Eugene St (Head Post Office, Bristol, in litt. 8 August 1972).

91 Marcy (1969: 153-4) notes the Lawford's Gate area and the Rope Walk (presumably the area just across the Frome from New and River Sts) were particularly bad in the mid-C18 for robberies of pedestrians.

92 As in those areas described by Dyos and Reeder (1973: 360) where pressure of expansion caused ripples of obsolescence to overtake "places once dancing with buttercups and [leave] them stale as cabbage stalks".

93 An observer in 1883 (Anonymous 1884: 26-7) noted among the typically decaying older buildings made into tenements in St Jude's, sometimes with additional rooms divided off to provide an extra rent, a chapel, one of its rooms thus partitioned off presenting a "wretched picture of squalor and gloom". This may possibly have been the former Gt George St chapel, but the observer does not give its location. The BCM do not appear to have retained the Gt George St chapel; an examination of their minute-books and of the chapel property-deeds if surviving would probably settle the matter.)

94 A son and a grandson of John Cozens have been Lord Mayors of Bristol.

95 J.M. Hall (1972: 13 n.4) rightly notes that public-house names, like street names, are "diagnostic fossils for future urban planners", and urges their retention (cf Storey's observation (1969: 157-8) that the

name of a road may be the only reminder of even a modern industry, Mollison Lane and De Havilland Rd at Hendon being the only reminders of the site of the de Havilland aircraft works and airfield at Hendon 1920-30). Possibly the "Pigeon" noted above in 1775 indicates the essentially working-class pastime of pigeon-fancying was popular in St Jude's 200 years ago.

96 That the Marquis of Granby was a popular figure is also suggested by his being modelled on tobacco-stoppers, the implement formerly used (and in a strictly utilitarian form to a limited extent reappearing) to tamp down the tobacco in the pipe bowl (quoted in Fairholt 1859: 233 and repeated via Fairholt in A. and C. Scott 1966: 54).

97 George Ewart Evans discusses in some detail the role of inns and pubs in rural East Anglia and the essentially non-industrial towns there prior to WW 1 (G.E. Evans 1975: chapt 7 and passim) and makes many of the points noted here.

98 Evidently a widespread tradition, for it is recorded that saloons in the South of Market slum area near the San Francisco waterfront sometimes acted as informal employment agencies in the early C20 (Averbach 1973: 204).

99 The anonymous correspondent to the Examiner, 24 August 1850, noted "two or three rows of old and discoloured tiles which frequently appear, in the ancient fashion, above a projecting lower window" on buildings in the area of St Philip and Jacob Out-parish outside Lawford's Gate, but no examples of this have been seen by this writer.

100 Another working-class and industrial corner of Bristol which should be examined by social historians and industrial archaeologists before the beautifully ugly brightly-coloured brick workers' rows are entirely demolished.

101 Joseph Ring I, John's father, had married into the Frank family, potters in Bristol since the end of the C17, and taken over their business.

102 Thomas George, James George, and David George. Thomas is Thomas George I (B ca.1765, F 1812, fl 1812-37 [sic], D 1835); James is his son (B ca.1787, fl 1821-58, D 1873) - for more details see below. David (fl 1829-36) has not been traced among documentary and personal material on the George family examined by this writer. Logically he could be a brother of James, but present evidence implies James was an only son; James had 13 children but none was called David and in any case his family was born over the period ca.1810-1832, which would be too late for a pipemaker starting in business in 1829. His being recorded working outside St Jude's, though admittedly not far distant, in St Philip's Plain (modern Narrow Plain-Broad Plain), could indicate he was not a relative of the other Georges.

103 Rich's Buildings are marked and named at the top of Asher Lane by Ashmead in 1828 (FIG 168) though the latter is not actually named. Rocque in 1742 (FIG 1(7) and Donne in 1773 (FIG 170) indicate Asher Lane but not Rich's Buildings, suggesting the latter had been built in the late C18 or early C19. Rich's Buildings, though not named as such, are still at the head of Asher Lane in 1883 (FIG 174) and 1903 (FIG 175), but are now (FIGS 176, 78) under the south end of St Matthias

House, a Corporation multiple-dwelling.

104 The term "junk" here is evidently used in its original meaning of old rope, in which way the reporter also uses it. The *OED* indeed first notes its use to mean general rubbish - and that as a colloquialism - only in 1913.

105 In the possibly even more squalid slum of the northern Kensington Potteries rents also rose in the second half of the C19. The nightly rates at lodging-houses had gone up in the 1890s first with abolition of the free Sunday night for weekly lodgers and then in some places with an increase in the cost from 4d to 5d, and this may have been partly because of an increased demand for housing as some of those evicted from central London slums moved into the area. Rents for rooms in the 1890s averaged 2s6d-3s6d a week for a single back room and 4s6d-6s6d for two small rooms, a furnished back room in 1899 costing 4s6d and a furnished front room 5s-6s; in 1849 the average rent for an entire small cottage in the Potteries had been ca.2s9d a week, and many persons were holding long leases and paid only ground rent (Malcolmson 1970: 36-7).

106 Grandfather of the film actress Angela Lansbury.

107 Mrs George is not listed after 1883; the Williams family disappears after 1883 but a William Pring takes over as pipemaker at their premises. Ring closed down either in 1883 or 1884, and may have been taken over by Hawley.

108 The *Mercury and Daily Post* correspondent says 1867, Arrowsmith's *Dictionary of Bristol* 2nd ed 1906 - cited as Anonymous 1906 ed - says (p.55) 1866.

109 The latest date mentioned in the booklet is 20 September 1928, when The Bishop of Bristol opened the converted Albion Pl houses (p.7).

CHAPTER 7:
SUMMARY AND CONCLUSIONS

1 It is much to be hoped that some enterprising body will sponsor a comprehensive filmed record of the last British, Dutch, and German pipemaking concerns before it becomes too late.

2 At a tangent to pipemaking, but nevertheless of interest because pipemakers manufactured them as a sideline, it is the recent finding of wig-curlers of waste pipeclay at Lower Castle St (*Arch. Rev.* 7 (1972) 62 s.v. Bristol - Lower Castle St), one with the initials TB, dated to the C18. No study has ever been made of wig-curlers to this writer's knowledge, but they were being made by pipemakers by the late C17, for Houghton (1693/4: 205) mentions their being specifically made for the purpose; in North America they are quite frequent on sites dating between ca.1700 and ca.1780 (I. Noël Hume 1970c: 321-3). As noted earlier (p.186), two mid-C18 pipekilns at Helston in Cornwall produced a number of wig-curlers as well as the pipes which dated the kilns (Douch 1971: 148, 146). According to Parsons (1964: 232),

pipe-fragments were being used as wig-curlers by the middle of the C17.

3 Now called The Local Historian.

APPENDIX II: CHURCHWARDEN PIPES AND THE SOUTHORN FAMILY

1 Edward VII succeeded his mother, Victoria, in 1901 but owing to illness was not crowned until 1902. A date later than 1871 is also indicated by several of the depicted pipes having vulcanite mouthpieces, which were first devised in 1878 by an English firm (A. Dunhill 1924: 247)

2 On the Southorn stamps a number appears after BROSELEY - this is not a code-number for the pipe type, as might be supposed, but a code-number for the maker, to enable the quality of his production to be checked (*ex. info.* D.R. Atkinson conversation 14 November 1971)

3 Subsequent evidence indeed suggests this was the case. The story, obtained by a local researcher, Miles Taylor, from the late Mrs Southorn, mother of Mr Clive Southorn and passed on to this writer by David Atkinson (*in litt.* 23 November 1974), is that there was a rivalry between the Roden and Southorn families and that Edwin Southorn, son of the first William Southorn, married a Roden and as a result separated from his brother William jr and was practically disowned by his father. Edwin worked at the Pitchyard (see p.988 below) and his brother William at Legg's Hill, the site of the present gate-making works owned by Mr Clive Southorn; the father may have worked with William jr or at the Smitheman works latterly occupied by the Southorn family (p.988below), but as Mrs Southorn said unfired pipes were brought from the Pitchyard (i.e. from Edwin's works) to Legg's Hill to be fired by William jr it seems more likely, in view of the father's hostility to Edwin, that he (the father) did not work at Legg's Hill or else that by this time he was dead. I am extremely grateful to M.J. Taylor and D.R. Atkinson for this information.

APPENDIX V: THE TERMS "SAGGAR" AND MUFFLE"

1 Shaw also, in one of those fits of over-learning to which C18 and C19 writers were sometimes prone, derives the term saggar "from the Heb. *sagar* to burn; and to this day applied as *segar*, to a rolled leaf of tobacco for burning while its fumes are inhaled" (S. Shaw 1829: 103, 1970 ed).

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Introduction

The compilation of this section has been done along more or less orthodox lines. Articles in journals or series publications are cited within inverted commas and the journal or series name italicized (underlined), except where the article has become a monograph and occupies an entire issue in which case the article is treated as a book and the whole title underlined. In this latter case the name of the publication series is appended in brackets. Unpublished MSS are cited by title, which is neither put in inverted commas nor italicized. Authors' names have the first name given only when the author is known to be a woman (except in Slavic language references where the gender of the writer is evident from the name form); this is to facilitate references to "he" and "she". The date given with the author's name is that of publication where known; particularly with modern journals therefore, it does not always agree with the date associatd with the volume number in question. When publication date of a journal is not known the date with the volume number is used. "Mac" and "Mc" are not separated from each other but are listed together separately after other "M" entries; Irish "O'" or "Ó "(sans apostrophe) are similarly listed separately after other "O" entries. Surnames including "d'", "de", "le", and "van" whether capitalized or not have been listed under the main word except where the auxiliary is an integral part of the surname (e.g. DeJarnette, Lefrancq, VanStone). Place of publication for journal is given only for obscure items (where known) or when the title is not sufficiently helpful. Personal communications are listed in a separate section following the main entries.

An asterisk preceding a reference indicates it deals with, or includes information on, either pipes or smoking or tobacco. In a number of cases it will be obvious from the title the work in question has only the most peripheral dealings with these topics; generally all articles which include at all meaningful comments have been asterisked but books containing only incidental references have not been. An exception among the latter, however, are published documentary sources (such as the Bristol Record Society's publication series) which it is felt are important enough to warrant such marking.

Virtually all asterisked works (or copies of relevant parts) are in the writer's library. It cannot be claimed the collection is exhaustive, for there is no centralized clearing-house for North American archaeological publications, and British publications appearing in the indispensable annotated listings in Council for British Archaeology publications (e.g. their annual *Archaeological Bibliography for Great Britain & Ireland*) are often far from easy to obtain in North America, but it is hoped nothing of importance has been overlooked. A phenomenon of recent years, however, even since this writer commenced this study in the autumn of 1967, has been the almost geometrically-increasing literature on pipes, particularly in North America, which is out of all proportion even in the burgeoning field of recent archaeology (cf Cotter and Hershey (comp.) 1973: 119-20). As regards some of it, one is reminded of Housman's complaint (1930: 111) that "The merciless prolixity" of commentators has "chattered implacably and unprofitably on"; but Housman also sais on another occasion that a scholar must expect to "spend much of his life in acquiring knowledge which for its own sake is not worth having and in reading books which do not in themselves deserve to be read; *at illa iacent multa et praeclara relicta*" (Carter (ed) 1961: 159). All works available to me up to November 1974 have been consulted, and a decreasing number of others up to December 1975 have been incorporated where practical.

American spelling habits such as "archeology" have been followed in titles where these are used in the original.

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*letter, lists, and drawings ditto dated 28 January 1969
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*letter ditto dated 5 April 1972
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*letter ditto dated 1 August 1974
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